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ECONOMIC AND INDUSTRIAL AFFAIRS

No. 1978

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ROLE OF SAVINGS BANK DEPOSITS IN FINANCIAL SYSTEM

Tirana PROBLEME EKONOMIKE in Albanian No 3, Jul-Sep 79 pp 59-66

[Article by Ramiz Shehu: "Saving Bank Deposits--Important Levers of the Socialist Financial System"]

[Text] In this jubilee year of the 35th anniversary of the fatherland's liberation, the State Savings and Security Banks also celebrated the 30th anniversary of their founding. During 3 decades, the workers of the State Savings and Security Banks have worked to meet the tasks assigned by the party for increasing savings deposits and developing state securities. For this purpose today there are 100 savings banks and more than 3,000 savings agencies. Through these deposit centers, the working masses deposit their temporarily free income and insure the cooperative and personal wealth in a voluntary manner.

The State Savings and Security Banks were established through the concern of the party and state immediately after the rapid reconstruction of the country, following the creation and expansion of socialist ownership, thanks to nationalization and setting up of new state enterprises, following the first successful steps for the creation of the socialist sector in the village, through the establishment of agricultural cooperatives. The State Savings and Security Banks were established when the necessary objective conditions had been created, when the economic development of the country was requiring such a step, precisely when the level of production of the period before the liberation had been surpassed, when the economic situation of the working masses had been improved and new opportunities were provided for further improving the people's standard of living.

Our savings banks, from the moment of their founding, were guided by the party teachings and had in mind the work experience of the savings banks of the Soviet Union in the period of Lenin and Stalin. They started their activity without any experience from the past, on completely new bases, resources and aims that were radically different from the bourgeois tradition, that were in contradiction with this tradition and that stemmed from the very nature of our new economic and social system. Nevertheless, assigned tasks were fulfilled successfully. As a result of the great work achieved, at the end of 1950, compared to 1947, the surplus of deposits increased by 2 times; of this, 77.2 percent belonged to workers and employees. It was also possible in that year to have one depositor for every 32.4 inhabitants. This shows that the well-being of the population was improving and that deposits were becoming more and more massive.

The first state loan of 30.2 million leks was made in 1949. Speaking about the importance of the first state loan, in his closing speech at the enlarged Third Plenum of the Central Committee of the Albanian Workers Party on 13 October 1949, Comrade Enver Hoxha said: "The first state loan, that the state had proclaimed, is of a great importance from a political aspect. Both because it raises patriotism among the ranks of the masses that provide money for the construction of the country, and because of the fact that the peasantry gave to the state a great amount of money that will help strengthen the country's currency and the state treasury."

The broad working masses of the country showed complete readiness and responded to the appeal for subsequent state loans. Thus, the second loan of 42.4 million leks was made in 1952 (this represented 3.9 percent of the state budget revenues); the third loan of 45.4 million leks was made in 1953 (it represented 4.3 percent of the state budget revenues); and the fourth loan of 41 million leks was made in 1955 (representing 3.2 percent of the state budget revenues). The granting, free of charge, of a great part of the obligations to the state by the workers of great political and economic importance. A total of 38,250,000 leks were granted.

The successful execution of these loans tells about the readiness, patriotism and love of our people for the party and the people's government; it tells about their readiness to build socialism and their confidence in an increasingly happier future. After the fourth loan in 1955, when our economy had been further strengthened and the state budget was in a position to meet by itself all the needs of the economy, culture and defense of the fatherland, no more state loans were issued. By the end of 1975, the state had paid all the first four loans.

The tasks of the State Savings and Security Banks were increased and expanded along with the development of the economy and of our socialist society. These institutions not only collected temporarily free, financial means of the working masses, but also acted as institutions that protected socialist property and the personal wealth of workers from the destructive phenomena of nature and from occasional accidents; and rendered various services to the working masses such as payment of pensions, rents and so forth. Because of their many and great tasks, the State Savings and Security Banks have been converted into important levers of the financial system of our socialist economy.

From their founding, the Savings and Security Banks, led by the party, as political and economic institutions, carried out a great work for propagandizing and popularizing the necessity and social and personal utility of deposits from savings. The implementation of the principle of building socialism with one's own forces required imposing as strong a system of savings as possible on everything, not only on the social economy, but also on the management of family and personal budgets; it required that education in savings be made second nature for every citizen and that the feeling for savings be deeply instilled in the awareness of all our workers, as recommended by Comrade Enver Hoxha.

Naturally, the savings deposits established after the liberation were radically different from those established before the liberation. In the conditions of oppression, exploitation and great poverty that prevailed under the feudal-bourgeois regime of Zog and later, during the occupation, the standard of living of the working masses was quite low. As a result, the broad working masses, that barely managed to get by, had no available monetary means to deposit as savings in savings banks. Even these few savings deposits, that were deposited in banks, were the property of landlords and the bourgeoisie created from the appropriation of the surplus value that they received from exploiting the working class and peasantry. In 1938 there was a total of 1,498 depositors or 1 depositor for every 694 citizens. They had 1,652,000 gold francs. However, in these savings deposits one could also clearly see the class distinction, the real economic situation of our people and the bourgeois and anti-popular distribution of national revenues. First, there were no depositors among the broad strata of the population; secondly, 10 percent of all the depositors, had 90 percent of the deposits. They belonged to those who oppressed and exploited the people--the capitalists, landlords, businessmen and higher grade employees; and third, the revenues created by these savings deposits were also appropriated by these exploiters who possessed the greater portion of the savings deposits.

The characteristic of savings deposits of that period was that they were either reduced or remained at the same level, like the economy of our country which strongly felt the influence of the economic crisis of the capitalist world of the 1930's and the anti-national and anti-popular policy pursued by the bourgeois landlord class in power.

During the Fascist and Nazi occupation, savings bank deposits were further reduced. They were 8 times less than in 1938. The ruling classes, dreadfully terrified by the war, seeing that the earth was sliding under their feet, removed their savings deposits, while the few that remained were used by banks as means for increasing the exploitation and impoverishment of the working masses. In the meantime, foreign banks, through the system of savings bank deposits, which they had and managed, used to remove parts of the currency of our country and use them to draw great profits, investing them in the economies of their own countries. Thus, Fascist Italy used to draw considerable sums of money from Albania, through its branches--"Banca Nationale Del Lavoro" [National Bank of Labor] and "Banca di Napoli" [The Bank of Naples]--in order to use them in the interests of its own state.

Under these conditions, immediately after the liberation of the country and the establishment of the people's government, one of the major problems that our government had to solve with the greatest urgency was that of the state finances, because the "finances and state banks had become completely empty and their finance apparatus was too bureaucratic..."[1] With the concern and leadership of the party our financial system was organized upon healthy Marxist-Leninist principles; it developed the class struggle in the financial and economic field, applied different financial methods and utilized domestic financial resources for the reconstruction and construction of the country with our own forces. The State Savings and Security Banks, as component parts of our socialist financial system, have pursued the same policy, always implementing the principle of relying on domestic resources, on our own forces, just as Comrade Enver Hoxha used to say in 1945: "in financial matters we have tried to fry with our own fat."[2]

Under the conditions of the existence of the dictatorship of the proletariat, savings banks had to deal with the working masses, to whom good opportunities had been given to establish and increase savings. With the setting up of the people's government and the gradual expropriation of the exploiting classes, the workers were liberated forever from oppression and exploitation; their right to work was guaranteed by law. Our workers were insured in case of sickness and old age; they were freed from the heavy burden of levies and taxes; and were guaranteed free education, medical care and other rights. In this way, along with the increase of social production and of workers' revenues and the improvement of the standard of living, from one period to the other, the matter of bank deposits from savings was constantly better organized.

Along with the execution of the party economic policy and fulfillment of many-sided tasks set forth in the five-year plans for economic development in the country, savings bank deposits were also developed as never before, becoming an important source for the budget and credits in each five-year plan. Through bank deposits, during the Second Five-Year Plan 5.2 times more monetary means than during the First Five-Year Plan were put at the disposal of the state. In the Third Five-Year Plan, 8.6 times more; in the Fourth Five-Year Plan, 13 times more; in the Fifth Five-Year Plan, 21.2 times more; and during these 3 years of the last five-year plan, 27.2 times more.

The increasingly more massive character of savings bank deposits is demonstrated by the fact that during the 1961-1978 period, deposits in savings banks increased, were 4 times more than in the 1950-1960 period, while the number of depositors increased by 3.5 times. Today in our country there is one savings account book for every three citizens. Structural, quantitative and qualitative changes have taken place along with the growing of savings bank deposits. Thus, the number of savings account books at the

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1. Enver Hoxha, Works, Volume 3, p 98.
2. Enver Hoxha, ibid, p 30.

end of 1978 was about 1,000,000. Compared to 1950, today there are 25 times more savings account books; while the amount of deposits in them is more than 165 times as great. The number of depositors among workers and cooperative members is about 70 percent of the total number of depositors.

To have an idea of the increased rates of savings bank deposits in our country, it is enough to say that in the years 1975-1978 alone the increase in savings deposits represents 22 percent of the total deposits made during 30 years. The average bank deposit for every city and village worker, compared to 1960, has been multiplied several times; the specific proportion of depositors, compared to the total number of inhabitants, has been considerably improved in comparison with 1950, when there was one savings account book for every 32.5 inhabitants and, in comparison with 1960, when there was one savings account book for every 6.9 inhabitants and so forth. At the end of 1978 there were 900,000 more depositors than in 1950. During 1978 alone, the city and village workers deposited more than 400,000,000 leks in savings banks.

These phenomena do not happen and cannot happen in the capitalist and revisionist countries; there, the people, through sacrifices and by skimping on food in order to confront the evil of worry about tomorrow, the menace of hunger and of unemployment, and sicknesses and economic crises, economize, put something aside and place it on deposit in a savings bank. However, these deposits, which make up a minute percentage of all deposits in banks and in savings institutions, placed by the rich strata of the bourgeois-revisionist society, do not express and can never express the high standard of living of the people, as the bourgeois and revisionist ideologists try to present and document this phenomenon. On this occasion, the index of statistical average is used as a means of deception, putting the workers and needy persons, who hardly manage to deposit 50 cents, among the rich people who do not know what to do with their money. Although workers' savings deposits do not make up more than 2-3 percent of the total amount of savings deposits, the statistical average hides this truth, creating the false impression about the alleged democratization of the capitalist system, about the elimination of poverty and about the enrichment of all the people and so forth, the "theories" that every day fill more and more the programs of the imperialist and revisionist propaganda. Thus, the workers themselves, as Marx used to say, deposit their money because of insecurity; they provide their enemies with the very weapon that protects the existing society that oppresses them.

In the revisionist countries, too, the bulk of deposits belong to a minority, to the clique in power and the cadres and intelligentsia that get 20 times higher salaries than the workers. Other sources of savings deposits in the revisionist countries are the various material incentives given as unfair compensations, honoraria and so forth that are used as means for the corruption of those people who zealously serve anti-popular and anti-socialist regimes in power.

In our country, because of the principles and criteria on which they are based, savings deposits have a completely different content from those of the capitalist and revisionist countries. In our country savings deposits combine social and general interests with personal interests, which does not happen in the capitalist and revisionist countries. Our party and state have also pursued a correct Marxist-Leninist policy in regard to the question of the savings deposits of workers. The principles and criteria of savings deposits of workers in our country are among the most democratic. They stem from the very nature of our socialist system.

The source of the creation of savings deposits is the workers' income from work. The enrollment of all people in useful social work, the continual increase in income from work and uninterrupted improvement of well-being, as a result of economic stability, of the reduction of prices and the increase in the purchasing power of the lek and so forth are the only bases for creating and increasing the savings deposits of the working masses in our country, where exploitation of man by man was eradicated a long time ago.

The workers' savings deposits are made on completely voluntary bases. There is no coercive factor that forces our workers to deposit their savings in savings banks, as people are obliged to do in the capitalist countries because of unemployment, sickness, old age and so forth. Deposits in our country are made on the basis of conviction and of personal and social profit.

The deposits from workers' savings in our country are used to further improve the living conditions of the people; these monetary means, temporarily free, are put at the service of the state in order to be utilized for the supplementary financing of the development of our socialist economy. In this way the correct combining of the personal and family interests of workers with the interests of the entire society is completely implemented. The deposits from workers' savings have always been a great contribution to the financing of the socialist economy.

The deposits from workers' savings in our country are insured by law by the state. They are completely liberated from threats of bankruptcies that take place in the bourgeois and revisionist society. In our country savings deposits are kept secure by the state; it guarantees to return them whenever the workers need to withdraw them.

Another important principle is the keeping of secrecy by law about savings deposits; this means that nobody is given any information about savings deposits without the authorization of the depositor himself, with the exception of penal cases stipulated by law.

The combining of personal and social interests is also expressed by the action of the state in granting an annual percentage of 2 and 3 percent on the amount deposited to the depositor. The revenues from these percentages have been continuously increased along with the savings and deposits themselves. Thus, in 1950, depositors were given 121,000 leks; in 1960 they were given 3,600,000 leks; in 1970, 6,200,000 leks; in 1973, 9,300,000 leks, and at the end of 1978, they were given 14,000,000 leks; this is more than the total savings bank deposits at the end of 1953. These are important annual revenues that are received by workers who deposit them and use them to improve their well-being. The combination of personal interest with social interest is also expressed in the application of some kinds of deposits: ordinary and long term deposits (which are deposited for a period of 6 months or 1 year). This, however, does not mean that the depositor cannot get the sum deposited before the termination of the period. The deposit can be touched, but the conditions of investment are affected: the percentage of interest reverts from 3 to 2 percent.

The city and village people deposit their savings in savings banks and agencies and draw them when they need and according to needs; as a matter of fact, they have the right to withdraw this money with the presentation of savings account books at the savings banks in every district.

The savings deposits in savings banks and agencies are made by depositing the money directly in these banks or agencies, or through withholdings from the payrolls by savings agencies.

The savings agencies are very important levers that assist savings banks and depositors in collecting financial, temporarily free, monetary means. Compared to savings banks, savings agencies are nearer to depositors; they are set up in work centers and agricultural cooperatives. Therefore, they are savings banks of the collective and, as such, they fulfill the depositors' needs better and quicker. The setting up of savings agencies and their distribution in enterprises, cooperatives, plants, units, sectors and so forth not only have proven their worth but also have considerably improved the level of their service to city and village depositors.

Even greater future prospects exist for the development of the activity of state savings banks and security institutions. The party and the people's government, based on approved plans and on measures which they are taking continually, relying on the real opportunities of the country and on our human, material and monetary resources, are comprehensively developing and strengthening our socialist economy. Thus, along with the continuous increase of expanded socialist reproduction and the improvement of well-being of the working masses, both the number of depositors and the sum of money deposited will also increase.

Presently there are more savings deposits from cities than from villages. But, a more limited expansion of deposits and a smaller amount of money in savings deposits from the village, in comparison with the city, do not express the real possibility of our developed socialist village. The agricultural cooperatives of our country today are large and modern units of agricultural production. Yields of agricultural products have been increased from year to year. As a result, revenues in cooperatives have come very close to the revenues in cities, (in some cases they are higher in villages); therefore, the reason for a small number of savings deposits in villages must be sought only in the insufficient organizational, propaganda, explanatory and convincing work carried out in villages with regard to savings bank deposits, both by workers of the savings and security banks and by the mass organizations. Moreover, the reason for the differences in savings deposits among the districts must also be sought in this work. Thus, the districts of Permet, Kolonje, Korce and Gjirokaster absorb, in savings deposits, more than 2 percent of the wage fund and revenues from advance payments of the agricultural cooperatives, while the districts of Lezhe, Vlore, Diber, Tropoje and Elbasan, which have greater opportunities to increase savings deposits, absorb only a small part of the wage fund and revenues from advance payments of the agricultural cooperatives. Thus, for example, while in July of this year the situation of savings deposits increased by more than 6 percent, compared to 1978, the increase in savings deposits in Elbasan District is about the same as that of Librazhd; the increase of Permet is 30 percent larger than that of Shkoder and even larger than that of Vlore and so forth. These things show that there are villages and districts where the influence of conservative concepts, concepts which are foreign to socialism, become the reason that many temporarily free, monetary resources, are left in the hands of insecure persons and other places, outside savings deposits, therefore, outside monetary circulation.

The knowledge, generalization and dissemination of progressive experience, without abandoning the principle of voluntarism not even for a moment are influential in achieving greater successes. Under the party leadership, with the concrete aid of the mass organizations, the workers of the Savings and Security Banks, together with finance and accounting workers, can and must carry out a better propaganda and agitation work with the workers, cooperative members, soldiers, employees and so forth, in order that the whole amount of temporarily free monetary means, will be absorbed in savings deposits. All should thoroughly understand that the continual increase of deposits in the savings banks and agencies is an important contribution to the development of the economy and culture, for the building of socialism in the country, for strengthening the defense of the fatherland and for the destruction of the fierce imperialist and revisionist blockade.

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ECONOMIZING STEPS FOR BUDGETARY POLICY IN 1980, BEYOND

Prague HOSPODARSKE NOVINY in Czech 21 Dec 79 p 17

[Article by Engr Belo Bosak, director of department of Czechoslovak Federation state budget, Federal Ministry of Finance: "A Big Step Toward Economy"]

[Text] In the course of discussion on the draft of the 1980 state budget, the CSSR Government adopted a number of important measures which aim at substantially better economy in the production and nonproduction sphere. They will be effective not only in 1980, but are to be part of the total, overall system which will apply also to the period of the Seventh Five-Year Plan.

This big step toward greater economy in the production and nonproduction sphere precisely in 1980 was not taken by chance. The more demanding internal and external conditions make imperative the most effective use of material resources. The fiscal and budgetary policy responds to this situation by effecting specific measures in the 1980 state budget.

Of special importance among them are the measures aimed at greater economy which should ultimately result in savings of approximately Kcs 2.5 billion. What measures do we have specifically in mind?

Comprehensive Travel Expense

Comprehensive travel expenses incurred only by the centrally managed economic, budgetary and subsidized organizations, that is with the exception of organizations managed by the national committees, amounted to Kcs 8.2 billion in 1979. On the basis of past experience with the travel expense limit, we deem it realistic to reduce, in comparison with the 1979 plan, the total travel expenditures by more than Kcs 1 billion in 1980, including the organizations managed by the national committees. Since considerable objectification of these expenditures was already achieved by the travel expense limits imposed in the previous years, we deem it possible to carry out this reduction in the 1980 budget across the board, that is by the same percentage for all ministries and kraj national committees. This, however, cannot be enforced by individual ministries and kraj national committees along the axis of management where it is necessary to proceed in a differentiated way.

Apart from more careful consideration of expendiency and necessity of business trips, it is necessary to reduce the overall travel expenditures also by the elimination of various consultations, meetings of activists, conferences, symposia, defense of thesis for the doctor's degree and other similar actions; by using cheaper means of transportation, particularly railroad, as well as by using less expensive accommodations.

Since the past checks have revealed instances of wasteful and ineffective spending of funds also on the business trips abroad, the government decided:

--in comparison with the limits specified for 1979, to reduce by 10 percent the limits for business trips abroad which are financed out of the noncommercial part of the foreign exchange plan and from the funds designed for foreign exchange incentives;

--to maintain on the 1979 level the limits for commercial business trips abroad financed from the commercial part of the foreign exchange plan.

Provided that they are correctly applied, the measures aimed at the reduction of travel expenses cannot adversely affect the operations of individual organs and organizations. It is necessary to question frequent business trips, their expediency and the number of workers involved. Other forms than personal contacts must also be used for the fulfillment of tasks and it is necessary to break the habit that all measures must be discussed with all persons involved, namely from the person directly in charge all the way up to the manager and this applies to the entire axis of management.

Advertising Expenses

Expenditures of economic organizations on advertising have increased considerably in recent years. In state economic organizations alone they amounted to Kcs 1.3 billion in 1976; they increased to Kcs 1.7 billion in 1978. In other words, they increased by 32.9 percent within 2 years.

As the checks by the CSSR Committee of People's Control on the observance of principles for verification of functional and operational reliability of consumer goods, and use of funds for advertising have revealed, the funds earmarked for advertising are uneconomically used and additional amounts are squandered because products are made available for so-called testing by laymen, sold at reduced prices or simply given away not only to the socialist organizations, but also to private individuals.

On the basis of the above checks, the government therefore adopted resolution No 301/1979 and approved the "Principles of achieving economy in the verification of useful properties of products and advertising." They spell out the mandatory procedure for the verification of functional and operational reliability and useful properties of products, and the measures for achieving economy in advertising here and abroad.

In this context the government decided to set a mandatory limit to individual ministries for advertising funds which the central organs will detail in various ways for the subordinated organizations. This limit is introduced both in the economic, and budgetary and subsidized organizations.

The actual expenditures in 1978 listed as comprehensive cost of advertising in the statement of account Cost, Acc. 8A-02 on line 89 in column 15 were taken as the basis for setting the limit on advertising funds for 1980. At the same time, the procedure applied to individual ministries varied according to the importance of advertising in respective sectors. In accordance with this principle, the limits were set in the following way:

--to the federal Ministry of Foreign Trade in the amount equal to 90 percent of actual expenses in 1978;

--to the CSR and SSR ministries of trade in the amount equal to 80 percent;

--in general engineering, consumer and food industries in the amount equal to 50 percent;

--to other central organs and national committees in the amount equal to 40 percent;

--to budgetary organizations in the amount equal to 50 percent.

By this reduction of advertising funds a total of Kcs 714 million is to be saved in 1980. Apart from the already mentioned measures specified by government resolution No 301/1979, these savings are to be achieved particularly by:

--elimination of unjustified advantages granted free or at a discount to the organizations and workers by other organizations. Among them for example are: free railway or airplane tickets; vouchers for tourist or recreational excursions and vacation in spas (with the exception of the vouchers issued by ROH [Revolutionary Trade Union Movement]); fishing permits; works of art; free tickets to performances, concerts and so on which unjustly benefit organs, organizations and individuals;

--not giving away articles with an enterprise trademark, which were purchased for advertising purposes, to workers of other enterprises, if these articles have nothing in common with the line of business of the respective organizations. Only technical printed matter should be used in domestic economic intercourse for advertising of products;

--avoiding unnecessary advertising in the press, television and so on. Advertising is not to be done by the organizations in which it is not socially justified in connection with the production or sales of products, rendering services of fulfillment of other tasks. Services and products designed for the domestic market should be publicized in such a way as to draw attention of a large stratum of consumers.

Although the reduction of funds for advertising purposes may seem relatively big at the first glance, it actually penalizes only waste which was noticeable in this area particularly in recent years.

The limits must be varied in detail for the enterprises--according to the significance and importance of advertising of individual products and services for the population and for achieving desirable publicity abroad.

Other Personal Expenses

The total of other personal expenses amounted to Kcs 4.2 billion in 1978 which represented 2.1 percent of total wage funds. Of other personal expenses approximately 15 percent constitute remunerations paid on the basis of copyright (royalties) and approximately 25 percent remuneration for work on the basis of agreement on work performed outside regular employment.

There are a number of shortcomings in these areas and considerable waste is obvious. Remuneration is higher than specified in the regulations now in effect; the scope of work remunerated is exaggerated; the fact that contracts on work performed outside permanent employment are exceptional is ignored; work is ordered which is not necessary and so on. Such a course of action often makes it possible for the organizations to derive undeserved income.

In order to increase economy in this area, the organizational instructions for the fulfillment of the 1980 plan specify that:

--the amount of other personal expenses for 1980 should be equal to the expected reality of 1979;

--in implementing the 1980 plan the available amount of wages and other personal expenses or wage funds of economic, budgetary and subsidized organizations should be reduced by the amount equal to 20 percent of the total amount of bonuses which the organizations cleared for payment in 1979 based on the agreements of work performed outside permanent employment, and by the amount equal to 10 percent of the total amount of bonuses which the organizations cleared for payment during the same period on the basis of the regulation on copyright (with the exception of publishing and printing organizations).

Hospitality and Gifts

In addition, the expense limit for hospitality and gifts was reduced, in comparison with 1979, by approximately 30 percent which will significantly affect economy in this area.

It is also proposed to review the existing permits for operation of airplanes (with the exception of the organizations which possess such a permit on the basis of the law on civil aviation) and not to issue new ones. The number of airplanes in VH [economic production units] and enterprises is growing. Economical use of these airplanes does not warrant the high purchase price and high cost of operation.

By more economical administration, maintenance and repairs of houses managed by the national committees, savings amounting to Kcs 423 million are to be achieved in 1980. For this purpose, a limit was set on losses by the housing enterprises in 1980 at 90 percent of the budget approved for 1979. This measure is also [meant] to mobilize reserves that exist in the operations of housing organizations and its implementation cannot therefore adversely affect the necessary repairs and maintenance.

Reduction of Labor Force

An important measure adopted by the government during the discussion of the draft of the 1980 state budget is the task of reducing by 2-10 percent the number of administrative, technical and economic workers. This measure aims not only at the overall economization of administration and management, but also at streamlining administrative and management work and rendering it more efficient.

The ministries and central organs with a definite number of permanent positions will reduce their labor force in a different way, taking into account the past trend of labor force increases and contemporary conditions and tasks of these organs. The central organs without a definite number of permanent positions will implement these measures in the following way: they will more radically reduce the labor force in their headquarters which consists exclusively of management and administrative workers, and less radically the labor force in other units of these organs which consists largely of technical, economic and operating personnel. The reduction of the labor force must be achieved through measures enacted by the ministers and heads of central organs which will constitute a well-rounded program of permanent nature.

The reduction of the labor force along the entire axis of management is to be completed by 31 December 1980 in the following way: the economic organizations will be reduced by 3 percent, in comparison with the number of technical and economic workers in 1979 (seventh class of uniform classification of jobs); the organizations engaged in research and development also by 3 percent (but excluding from this reduction the scientific workers and workers engaged in research and development); the economic research and special-purpose organizations by 10 percent. Before the end of 1979, the federal Ministry of Labor and Social Affairs will issue instructions on releasing, placing and monetary remuneration of workers related to the implementation of rationalization measures in this area.

Reduction of Premiums and Bonuses

The uncompromising determination to achieve greater economy is borne out also by other measures enacted by the CSSR Government with the following objectives:

--to reduce the number of service cars in 1980 except cars used for technological purposes to the level existing on 31 December 1975 and to insure their efficient use in accordance with the principles of the federal Ministry of Transportation for determining the optimum structure of service car pools and their economical use. At the same time, the organizations must see to it that service cars without professional drivers assigned to them (so-called vehicles driven by officials) must not be given for the exclusive personal disposal of heads of organizations or their deputies with the exception of those organizations which do not have professional drivers;

--to impose penalties for not putting into operation imported machinery and equipment on schedule which should be graduated, but should not exceed 10 percent of the purchase price of this machinery and equipment. The organization must pay this penalty to the state budget in accordance with the instructions which will be issued by the Ministry of Finance;

--to decide that the total of premiums and bonuses for management and other personnel will be reduced by 5 percent of fines and penalties paid in the respective year with the proviso that this reduction will not exceed 30 percent of bonuses and premiums. The purpose of this measure is to insure a direct impact of fines and penalties paid by the organizations, because of the shortcomings in a specific area of its operations, on the material incentives for management personnel of the organization. Likewise, it was decided that financial funds and resources must not be redistributed in order to make up for the deficit which arose because fines and penalties were paid.

The effectiveness of the entire complex of measures of fiscal and budgetary policy aimed at substantially greater economy to be achieved in spending of material and financial resources in the production and nonproduction sphere which was adopted by the CSSR Government resolution No 312/1797 completely depends upon the understanding with which their implementation will meet on the part of management organs at all levels of management, and on the support lent to them particularly by the ROH organs and organizations. It would be a gross mistake and also sign of misunderstanding, if the implementation of these measures were confined to the administrative forms which would lack rational, pertinent purpose of these measures. It is therefore imperative to see these measures aimed at greater economy in broader contexts and in the light of the conditions of the planned development of our national economy not only in 1980, but also in the years of the Seventh Five-Year Plan, and to regard them not only as an important economic task, but also a highly political task.

This purpose must guide the fiscal organs, when they check on the implementation of these measures during 1980, and other control bodies along the entire axis of management should likewise act accordingly. Only through an effective system of economizing measures which will be applied in accordance with the specific conditions and tasks of each enterprise and organization, and by checking on their implementation, shall we achieve that economizing will become a necessity not only for every manager, but for all workers as well. As was emphasized at the 14th plenary session of the CPPZ Central Committee, this together with the increase in efficiency of the entire reproduction process is the indispensable prerequisite for our further economic development.

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PROBLEMS, FUTURE OF CONSTRUCTION EVALUATED

Housing in Seventh Five-Year Plan

Prague RUDE PRAVO in Czech 7 Jan 80 p 3

[Article by Ladislav Supka, Minister of Technological and Investment Development]

> [Text] Housing policy is an important component of the CPCZ's social program. In the past 30 years, we have constructed more than 2.6 million housing units in which over half of our citizens now reside. The intensity of housing construction has grown especially during the last 10 years when about 1.3 million housing units were built, i.e., as many as during the preceding 20 years.
>
> The level of apartment furnishings is high when measured by international standards. Apartments constructed by the delivery system during the last 5-year plan are equipped with built-in furniture, hot water, 99 percent of the units have central heating, 75 per cent have gas links, and apartment buildings of more than five floor (i.e. 70 percent) have elevators.

Overall housing construction does not include apartments alone, but also schools, kindergartens, nurseries, health and cultural installations, the retail network, post-offices, electrical, gas and water distribution networks, and all else needed for the civic and technological equipping of housing settlements. Moreover, it also includes construction of electric and heating plants, automatic telephone centrals, river dams and water works, water filtering plants, and other installations which make contemporary high standards of comfortable housing possible.

The construction cost of a so-called stripped apartment averages more than 130,000 korunas, the cost of technological and other furnishings in relation to one unit is about 80-85 thousand korunas, even more in some cities.

The state budget therefore calculated the overall cost of 644 thousand housing units at more than 100 billion korunas, plus the so-called conditional investments which amount to another 80 billion korunas.

The inherent aim of the party's housing policy is to ensure for all our citizens sufficient housing. Along with this, appropriate allocation of sites for housing construction is being resolved according to national economy needs, since an adequate number of housing units must be constructed for the working people in those enterprises which are built outside established communities, e.g., mines, electric plants, plants with high water consumption, etc.

We cannot say that we have done too little in the housing problem. The opposite is true. A country with one housing unit per circa 3.1 citizens, a country in which more than half of the inhabitants live in new units with high-quality furnishings, can rightfully be counted among the advanced European states. With better management of the overall housing budget allotment, however, we could have advaned even farther.

Two Records

In comparison with the overall situation in Europe, we have recently achieved first place in the intensity of housing construction. Unfortunately, we have also reached first place in the decrease of habitable housing, half of which already includes newly-constructed housing.

It is natural that there be a decrease in housing, as a consequence of, for example, deterioration of old buildings, the need to tear down buildings which cannot be renovated (some of the so-called proletarian buildings erected after World War I with concern for profits, rather than people). A significant decrease in housing units also occurred due to migration of citizens from the country into cities and the consequent transformation of agricultural communities into recreation sites.

Less acceptable reasons for a housing shortage, however, are decreases caused by transformation of buildings into office space, insufficiently thought out demolition of buildings and family houses in order to gain space for new apartment construction in the interest of easier solutions of urbanization, demolition of housing units in the interest of principal highway construction through towns, etc.

Besides, deterioration of buildings has not always been caused by age but often by careless maintenance. Family houses and adapted agricultural settlements, even around larger towns and industrial agglomerates, can be remodeled to recreational cottages and, given the present density of transportation networks, can serve the working people or retirees for healthy living in the country.

In 1950, we had 3.47 million housing units in the CSSR. Since then, along with construction of this year, we have built about 2.7 million housing units, but by the end of the Sixth Five-Year Plan we will only have a little more than 4.8 million housing units. This is due primarily to excessive attrition.

The current excessive losses of housing units delay the reaching of the basic goal in party housing policy, i.e. providing an individual housing unit for every family. The fact that many young families would rather continue living with parents, rather than accept lower category housing offered by the National Committee, and thus wait for a first-category apartment in a new building, shows that we have reached a period in which quantitative and qualitative housing problems are being solved, but at the price of excessive cost and extention of the so-called housing problem in certain cities and region. Consequently, the party's great effort and enormous outlays expended on housing construction, do not produce anticipated results quickly enough, which has its economic, social and political impact.

Good Management in Housing

There are towns which handle the housing problem with the case and thoughtfulness of a good manager, trying to procure for the citizens most expeditiously and economically the largest possible number of modern, comfortable apartments, while preserving the historical hub of the towns through sensitive architectonic measures. These towns demolish buildings only as a last resort, new construction is being supplemented by renovation of older buildings to qualify for first and second category apartments. Gaps in building groupings are filled out in a manner which preserves the character of the town, even through the use of modern construction materials.

It is not simple work. It means concentrating the means intended for repairs and maintenance on selected buildings only, consulting with sanitation workers and firefighters, since in renovation of older buildings it is not always possible to fully observe all currently valid and very strict regulations. It also requires consultation with the tenants of premises intended for renovation. It is not simple but it is well worth it.

Renovation of apartments in the Sixth Five-Year Plan was not always managed in a perspective manner. It emanated from initiatives of well-meaning national committees, and in some places under pressure of local needs to improve quickly and relatively inexpensively citizens' housing. In this five-year plan, over 20,000 apartments will be renovated. Given today's pace of housing construction, it is not much; on the other hand, 60,000 contented citizens is not a minor achievement either. As always in the past, it is still true that peoples intiative, their dedication and courage to resolve even complex problems, as well as their desire to benefit society, is the basis of all progress.

Many initiatives, for example, in Uhersky Brod, Mlada Boleslav, Klatovy, etc, prove that, with the application of modern construction methods, new buildings can be built among old.

The cited facts about shortages and housing losses, however, show that not all cities and towns are proceeding in this manner.

Difficulties Can Be Overcome

We must learn to answer especially the following questions:

--how to objectively assess older housing inventory, which buildings to include in renovation programs, which to use for other purposes, or allow them to remain as they are and eventually tear them down;

--how to justify a retreat from current plans to have main highways run through towns;

--how to solve the need to limit land losses to the lowest possible degree;

--hot to resolve the relationships of urbanization in planning new settlements and the need to use to the fullest the still well-preserved housing inventory;

--where to obtain necessary products for housing modernization, especially the less common ones;

--how to achieve sufficient planning and implementation capability for housing renovation;

--where to move tenants during the renovation period?

It is worth presenting at least a brief explanation of these problems. Objective assessment of the older housing inventory requires maximum exclusion of the subjective factor. We have prepared and tested in practical application a method of calculating the cost of modernization, the necessary materials and products. This permits us to compare the cost of renovation with the cost of new apartments, and use this computation to decide between modernization, alternate use, or demolition.

A retreat from hitherto applied intentions to plan the principal long-distance transportation routes through cities and towns, is unquestionably necessary. This approach is one of the causes of losses in housing inventory, one of the causes of noise and vibration, in contravention of regulations, one of the causes of polluting cities and towns with harmful emissions, and threatening the lives of pedestrians. For this reason, the CSSR Government decreed a rapid revision of planning of communication systems whose realization would require demolition of housing, as well as other installations.

The need for demolition of housing units and the clearing of the land for new housing construction in the interest of reducing loss of agricultural land, must be viewed not only in the light of economic, but also social and political criteria. According to valid indicators of population density per hectare, it is possible, in demolition of four-floor and taller apartment buildings, to place on the cleansed area fewer new apartments than in the old building. It thus becomes a matter of more, rather than less land loss because for the construction of the same number of apartments we need a larger area, plus the fact that debris from the demolition has to be placed in some cases on agricultural land simply because there is no other way.

Demolition of family houses brings little gain in terms of agricultural land conservation because on these cleared areas it is possible to build apartments for only twice as many people, and often much less than that.

Construction on these cleared areas is very costly, since one must remove not only the buildings but also their foundations, sidewalks, roadways, including the subsurface base. Expenditures of clearing and cleansing reach as high as 75,000 korunas per apartment, so that the overall cost of a new housing unit, including all furnishings, are about double of those constructed in a clear new area.

Finally, unless the entire process, beginning with demolition, through clearing the area, removal of debris, all the way to new building construction, is effectively and rapidly implemented, the project becomes a subject of justifiable criticism by citizens. When for months, even years, people walk by the site of demolition, even though fenced, they regard such management of housing assets critically. Or, when people build family homes, spend years of effort plus their savings, only to be notified shortly thereafter that an entire row of such houses is to be torn down in order to make way for a new road or another construction project, it is hardly a wonder they become embittered. Moreover, this is evidence of insufficient planning in urban development, and shows a callous attitude toward the state budget, as well as toward people.

Solutions in urbanizations relationships and the need to utilize to the fullest current well-preserved housing, is a problem the resolution of which confronts especially the kraj design institutes.

Problems of Energy in Housing Construction

Anyone, especially in tall buildings, who occupied apartments on the upper floors or on the building perimeter, knows from his own experience that his living area is colder than others, this being caused by the cooling of the outside walls by air circulation. With respect to energy, it is therefore better to avoid high-rise construction of more than nine floors, which is more costly and requires more space to fit in among other buildings. It is desirable to reorient construction toward more compact arrangements of fewer floors. Consideration of energy is not the only factor in such a system.

The obligation to allow, in overall or even sectional urban restructuring, some older buildings to stand, will contribute to a change in current notions in urban configuration. Construction of settlements around historic cores leads to a flight from the inner city. This has economic, social as well as political consequences. In other sectors there must be shops and other public facilities which means doubling the work force, increasing the cost of urban transport, etc. It is for this reason that we have recently seen around the world emphasis on more compact urban arrangements and a decrease in separated residential communities and industrial city districts.

In the interest of gains in construction capabilities, the CSSR Government has already adopted certain measures and decreed in the Seventh Five-Year Plan an adjustment of tasks for the okres construction enterprises in the area of repairs and maintenance of already available housing, in order to utilize it in its present condition or make it ready for renovation.

As explained in an address on Miners Day in Havirov by CSSR Prime Minister, Lubomir Strougal, housing renovation is beneficial with respect to both energy and economy. Construction of one new apartment requires about 50 tons of measurable fuels (which compares well with energy consumption on the international scene), whereas for renovation of an older apartment only 15-20 tmp is needed. Using the amount of energy needed for one new apartments, we can renovate three older ones.

Already several years ago, experts from all European countries have agreed that no advanced country in Europe is rich enough to tear down its entire base of older housing and replace it with new. Czechoslovakia is no exception.

It is not enough to recognize the problems of modernization, it is also necessary to resolve them. To lower current housing losses by at least one third and expand renovation at least threefold, is a basic task of the Seventh Five-Year Plan, without the fulfillment of which it is impossible, under the present energy situation, to ensure successful continuation in the procurement of sufficient modern housing for our people.

Intensify Economizing

We must utilize older available housing effectively and economically even in the countryside. In practical terms, the problem can be addressed in a variety of ways, using migration of some workers into towns, while others commute to the industrial agglomerates. The second alternative in the effort to utilize country housing should be encouraged. It will be appropriate to offer one-time subsidies for family home and settlement repair to those workers or retirees who have decided to adapt this type of housing for permanent residence, thus making available their present apartments in places where there is a shortage. Such a solution can be beneficial to society, as well as to the individual himself. With the financial contribution, the latter will adapt the country residence so that it offers a living standard to which he was accustomed. The state will save the expense of building a new apartment in town.

Another way of intensifying energy conservation in housing construction is expanding the use of insulation in both old and new housing, including spraying insulation material, tightening windows, etc.

In recent years, the CSSR Government has also taken note of the broad problems of production and installation of thermostats, automatic regulators, etc. By government decision, a new directive was issued last year governing the quality of building insulation materials. This directive will only become effective for construction projects approved after 1 January 1984 because its application presupposes reconstruction of certain prefabricated materials in panel manufacture. In some construction systems, however, it will be possible to build according to the stricter norm even earlier, and construction industry must do everything possible toward its rapid implementation.

The machine industry was tasked by the government to gradually ensure production of a sufficient supply of thermostats, regulators and other instruments which contribute to thermal economy. This process will take several years. Heat delivery meters are relatively expensive and will be initially installed in distribution stations and only later at the point the heating pipes enter the building. Distribution stations and boiler plants will be equipped with the so-called equithermal regulators which control delivery of heating water according to outside temperature. Individual apartments will have the so-called ratio heat meters, the production of which is relatively inexpensive, and which measure heat consumption by volume and time of each radiator. In comparison with the present measuring of heat consumption according to apartment size, this will provide a more objective indicator.

Manufacture of thermostats controlling each room individually (bedrooms need not be as warm as living rooms) has begun for those interested in heat conservation in their apartments. Thus far, interest has been limited to citizens who pay the total cost of heating themselves, but demand will grow following the introduction of an objective heat measuring system in individual apartments. Thus it will no longer be economical to regulate apartment temperature by way of opening windows.

The need for significant improvements in energy and heat measurement in apartments, demands implementation of additional tasks in the quality of construction, high-quality window and door manufacture, as well as in production of sufficient supplies of insulation materials. All this will also require stricter standards in apartment construction authorizations. Another measure to intensify economy, and which affects housing designers, is the ban on excessively large glassed areas in administrative and similar buildings where heat consumption is higher.

Where and How To Build

In drawing up housing policy for the Seventh Five-Year Plan, it was necessary to resolve the problem of appropriate locations for housing construction which would provide the best conditions for availability and stabilization of the work force, while allowing for the inevitable mobility of labor, necessitated by priority requirements of certain sectors in the national economy. New apartments will be built primarily in areas where it is desirable to regulate migration and in which it is necessary to liquidate presently available housing due, for example, to mining activity and construction of water or energy installations. In housing construction site allocation, we must take into consideration a realistic assessment of heat supply and timely construction of thermal sources.

Toward the end of the Fifth Five-Year Plan, research showed that enterprise housing construction does not sufficiently fulfill its stabilization functions; therefore, as of 1 January 1976, cooperative stabilization housing construction was introduced. This form has a higher stabilization effect because the enterprise offers the worker a nonbinding loan (averaging 27,000 korunas) for membership share in the housing cooperative, which must be repaid only if the worker does not fulfill his contractual obligation with the enterprise.

During further checks in 1977 and 1978, it was found that the stabilization effectiveness of enterprise housing was still weak, whereas the effectiveness of cooperative stabilization construction is significantly greater. Simultaneously, it was demonstrated that the use of both systems together is untenable, which is why in the Seventh Five-Year Plan only cooperative stabilization construction will be used. This will also make it possible to offer cooperative apartments even to workers in other selected professions of other sectors, for example, certain job categories in health care.

Thus in the Seventh Five-Year Plan there will be only three types of housing construction--cooperative (including stabilization), communal, and individual. While the share of communal housing construction in the Seventh Five-Year Plan will be somewhat lower in new housing, its share in renovation will be higher. If the loss of communal apartments is brought down to a minimum and modernization of older communal apartments is ensured, it will be possible to implement social policy in housing in a more effective manner. This does not depend solely on construction unions which are responsible for policy implementation, but even more on the construction authorities which issue permits for demolition.

The share of individual construction is to remain virtually unchanged in the Seventh Five-Year Plan. During 1981-85, it is envisaged to build about 180,000 apartments in family houses, while maintaining the present concept and level of state assistance to the builders.

The basic objective of housing policy for the Seventh Five-Year Plan, under more difficult conditions brought about the sharp price rises in fuels, energy and raw materials throughout the world, is to ensure for our citizens basically the same increment of modern apartments as in past five-year plans, to speed up the resolution of the housing problem through a decrease of current losses, and by combining new construction with renovation of available older housing. Along with this, we will continue to confront the problem of lowering fuels and energy consumption for construction and operation of apartments, especially in their heating.

Everyone will have to participate in the implementation of this concept, designers, builders, national committees, machinery workers, lumber industry workers, as well as the workers in ministries. Implementation of this concept places high demands on the work of us all, much depends on our initiative, dedication and courage to tackle even complex problems, thus benefitting society as a whole. There are in the CSSR enough people who can make sure that even this exacting task is mastered.

Lagging Efficiency of Investment

Prague HOSPODARSKE NOVINY in Czech 21 Dec 79 p 13

[Article by Miroslav Zidlicky and Margit Synkova, Czechoslovak State Bank]

[Text] The bank grants loans and makes subsidies available for the financing of building construction. At the same time, it regularly checks the effectiveness of these investments on an annual basis. It monitors the construction projects to determine how the projected parameters are being met, as well as to what extent the builders live up to their commitments in the process of acquiring the production instruments. This year, 27 construction projects were evaluated in this manner, representing a budget of 8.3 billion korunas. The investigation dealt with investments completed in 1976, which were evaluated by the end of 1978 in accordance with paragraph 70 of the Ministry of Technological and Investment Development decree No 163/1973 (conducted after 12 months of full operation).

Well-Known Pains

In evaluating these construction projects, the Czechoslovak State Bank (SBC) again encountered the well-known pains of our investment construction, which we have so far been unable to overcome.

Deadlines which were long to begin with, are still not met. Of the 27 construction projects examined, 21 exceeded deadlines by an average of 29.3 percent, and in 15 of these, even this extended deadline was further exceeded by another 17.1 percent. For example, the Central Coal-Crushing Works in Tusimice was 65 months late (i.e., 56 percent) in completion, and Kovosmalt in Filakovo was 48 months late (i.e., 76 percent).

The original budget projection of the reviewed construction projects of 7.9 billion korunas, increased to 8.6 billion. Far over programmed ceilings were, for example, the reconstruction of Nejedly Mine II, Tatry Banovce state IV, cord rubber in Velka nad Velickou, the Cizkovice combine, radial tire production in Puchov and the Harmanec Paper Works.

The SBC obviously took appropriate steps in these cases. In instances of both failure to meet deadlines and exceeding programmed cost ceilings, it lowered investment credit by a total of 99 million korunas, and state budget subsidies by 80 million korunas. The investors are thus forced to employ their own assets to a greater degree. Investment credit was cut, for instance, in the construction of Liptovska Mara Water Electric Works, in the reconstruction of the Railroad Car Works in Studanka, in rebuilding of the freight car repair shops in Trnava and Kosice. Subsidy was lowered, for example, on the construction facilities for tinfoil wrapper production in Kosice, in Tatra Banovce-stage IV, in the Neratovice sulphuric acid plant, in the reconstruction of the textile mill in Jaromer, and in building panel production in Michalovce.

Besides these negative phenomena, we do note certain positive features, for example, we have succeeded in lowering import of machinery and equipment from non-socialist countries by 37 million korunas, and in replacing them by domestic production (e.g. in the construction of the Zizkovice combine) or as a result of changes in production programs. In a few instances, the value of import decreased due to lower prices.

Production Short-Falls

In analyzing in 1978 the process of meeting commitments in acquiring production capacity in 88 construction projects, we have found unsatisfactory results. We noted that in the second year of operation (i.e. investments introduced for trial operations in 1976), the projected production volume was reached in only 14 construction projects, and in the first year of operation (i.e. investments introduced for trial operation in 1977) in only 17. One 35 percent of the evaluated construction projects operated at full capacity within the 2-year deadline after the start of operations.

The annual production volume in the assessed group, reached 33 billion korunas, instead of the projected 38 billion. The largest short-falls were found in the East Slovak Iron Works, in the modernization of the wide-belt systems, in construction of the Avia plant, in the construction of petrochemical complexes in Slovakia, in the meat combine Prague-South, and the Zahorie combine. The investors tried to partially make up for the shortfalls by production using existing assets, nevertheless, the overall shortfall could not be offset.

The projected production volume was reached, even exceeded, by the new tire plant Red October in Otrokovice, Tatra Banovce--stage IV, petrochemistry--stage 1 A, and the electric plant in Chvaletice.

In 1978, the shortfall in production negatively affected deliveries for export (they were lower by 419 million korunas), caused by a short-fall in related production of 745 million korunas and lowered the market turnover by 190 million korunas.

Serious problems stem from the fact that in 26 construction projects we can expect short-falls in other years as well (in 1979, in 26 construction projects--1.9 billion korunas, in 1980, 22 projects--1.17 billion korunas).

Shortages in the Labor Force

What are the main reasons of the lower production volume in newly-constructed facilities? They are primarily the following:

--shortcomings in material and technological supply, for example, the Zahorie II combine produces unsuitable limestone and loams in which the water content is too high; a shortage of rye tissue negatively influenced production in the Ruzomberok breeding plant, and the low sales of slaughter animals, in turn, lowered production in the meat combine in Hodonin;

--shortages in the labor force and the ensuring lack of trained machine operators; for example, in the meat combine in Rimavska Sobota there is a shortage of specialists in the slaughter of beef; following reconstruction, 7,065 workers were envisaged for Avia Prague, whereas the average in 1978 was only 5,300;

--poorly guaranteed sales, e.g. central distribution in Bucovice, the Korycany plant, building panel plant in Malesice, cellular concrete in Horni Procaply, brewery in Most-Sedlec, and building panel plant in Michalovce;

--changes in types of products, e.g. the machine plant in Bardejov manufactures angled shafts instead of the projected hydraulic products; Avia Prague was to have terminated manufacture of V3S cars in favor of the cheaper Avia 430;

--malfunction of machinery and equipment, e.g. Zahorie combine (used Prototypes from Prerov machine works), the petrochemical complex (furnaces and exchanges) and ethyloxide and glycol II (insufficient compressor performance).

However, the basic causes must be sought in the labor shortage. Contrary to original expectations, the projects are short 1,347 people, including 696 bluecollar workers. Yet, at the same time, the number of bluecollar workers in the principal shifts is exceeded by 469. This means that they are concentrated into the main shift.

All these shortcomings, whether the originated in the course of construction or in startup production, were negatively reflected in the worsening of economic indicators. For instance, it was because of the lower than projected production volume that profit formation failed to reach the required volume --unrealized profits reached 632.7 million korunas.

Almost all effectiveness indicators of investment construction were worse than projected. The effectiveness of basic assets (i.e. annual production volume divided by overall investment outlays) was lower than expected by 8 percent and investment rentability (i.e. annual profit divided by outlays included in the plan of investment construction) was lower by as much as 35 percent.

The worsening of these indicators also negatively influenced the time period of returns on expended outlays in the construction projects under review (i.e. the share of overall expenditures in the annual gross profit and writeoffs), which lengthened by 41 percent. The production shortfall and unformed profit increased by more than a half, the shortfall in deliveries for related production increased by three quarters and doubled in the case of export (see table).

The Czecholsovak State Bank imposes harsh sanctions in cases of shortages in investment construction. For example, it increased interest payments by more than 6 million korunas; it proposed to lower state budget subsidies by 25 million korunas; and insisted on early repayment of investment credit in the amount of 13 million korunas. On the other hand, in cases where the construction project began full capacity operation ahead of projected time, the bank awarded bonuses.

The SBC sanctions, however, come after the fact, they do not hit on the causes of the shortcomings. We assume that higher effectiveness of the entire process and with it respect for deadlines, as well as faster achievement of full capacity operation, will be achieved through correct application of CSSR Government resolution No 23/1979 which approved a series of measures in the planning of basic means reproduction.

Developmentof Basic Economic Indicators in the Construction Project Under Review

	Indicator Value		Worse (-) or Better (+) Compared with 1975***
	Estimated	Real	
Effectiveness of Basic Assets	0.76	0.70	+49%
Investment Rentability	0.17	0.11	-45%
Return Factor on Expended Outlays	4.92	6.94	-34%
Return Factor on Investment Credit	1.72	2.35	-65%
Workers Shift Coefficient	2,152	1,755	+3%

**Comparison of the results of this review with the previous one, of construction project completed in 1975.

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ENERGY CONSERVATION, DEVELOPMENT PROGRAMS ANALYZED

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['Analyses and Reports' feature article by Werner Gruhn: "On the Energy Policy of the GDR." Translations of the following two East Berlin EINHEIT articles cited in footnotes below are available as indicated: Footnote 2, by Gerhard Schuerer, chairman, GDR State Planning Commission, published under the heading, "Energy, Raw Material Development Reviewed, Intensified Integration Urged," in JPRS 72617, 15 Jan 79, No 1839 of this series, pp 13-21; and footnote 41, by Hans-Albrecht Luetke of the GDR Ministry for Environmental Protection and Water Management, under the heading, "Environmental Protection Measures, Philosophy Detailed" (including a related article by Prof Harry Nick), in JPRS 74081, 27 Aug 79, WORLDWIDE REPORT: ENVIRONMENTAL QUALITY No 222, pp 26-44. A translation of the East Berlin DIE WIRTSCHAFT article by Prof Siegfried Nowak and Dr Guenter Friedrich of the GDR Academy of Sciences, cited in footnote 27 below, is published under the heading, "Greater Processing of Petroleum Necessary," in JPRS 74292, 2 Oct 79, No 1939 of this series, pp 34-38. Finally two additional West German analyses cited in footnotes below have been translated in the following JPRS issues of this series: Footnote 8, by Manfred Melzer, published under the heading, "Current Problems in Economic Planning Analyzed," in 73014, 16 Mar 79, No 1868, pp 56-70; and footnote 9, by Raimund Dietz, under the heading, "Vienna Institute Analyzes GDR Investment Policy," in 71192, 26 May 78, No 1756, pp 58-74]

[Text] "The CEMA countries are the only industrially developed area in the world which has been spared the heavy blows that the energy crisis is dealing the capitalist world," declared Soviet Premier Kosygin on 26 June 1979 at the 33rd CEMA Conference in Moscow.[1] He pointed out in this connection their systematic tapping and utilization of their own energy resources and the extensive fuel and power deliveries of the USSR to the other CEMA countries.

Expressing himself to the same effect was the chairman of the GDR State Planning Commission, Gerhard Schuerer.[2] The energy supply of the GDR is assured, he said, through long-term planning. He said that the GDR is supplying two thirds of its consumption of primary energy from its own deposits, and in addition there are purposeful measures for securing imports on a long-term basis--imports which above all come from the Soviet Union. The most recent component of the network of agreements and arrangements which the socialist countries have set up for the implementation of a joint energy policy is a target program on cooperation in the sector of raw materials and fuels, adopted in June 1979 in Moscow at the 33rd CEMA Conference, which lays down the strategy of the CEMA countries for the period up to 1990.

In contrast to these optimistic representations, there are reports according to which the CEMA countries as well must wrestle with problems involving their power and fuel supplies, both at the present time and also in the longer run. For example, serious shortages appeared in the GDR last winter when unfavorable weather conditions necessitated power cutoffs.[3] Manifesting themselves here were deficiencies in the supplying (and in the stockpiling) of coal-fired power plants and in making available substitute capacities for electric-power generation (in the GDR or in neighboring countries) which would have been able to offset a shortfall.

By no means does it look as if the energy crisis of the capitalist world is passing by the socialist countries without any consequences. At the least, the increase in prices for petroleum is likewise falling upon the socialist states--even though with a time lag--because by agreement the prices which the Soviet Union charges to its customers in the CEMA countries follow the world-market prices. Moreover it is uncertain whether the USSR will even be able to ensure that the rest of the CEMA states will be supplied with petroleum and natural gas in the 1980's. Above all, its petroleum production, but also its natural gas extraction and coal mining, lagged distinctly behind the planned rates of increase in the first 6 months of 1979.[4] In any case, GDR Premier Willi Stoph is proceeding on the assumption that the burden on the USSR must be eased in this area, and he promised at the 33rd CEMA Conference "to intensify even further our own efforts to develop our raw-material and energy base"[5]--that is, to make even more use of brown coal and to employ the imported oil more efficiently.

In the FRG, heated and often controversial discussions are being held about a long-term securing of its energy supply. Possibilities and limits of energy conservation, overcoming the consequences of the shortage in and increased price of oil, a revival of coal and its possible consequences due to the destruction of the countryside and air pollution, expansion or shutting down of nuclear power plants, and the development of new, environment-sparing sources of energy are the most important themes. The problems lying at the basis of these discussions are present in the GDR as well.

In what follows, we will investigate what weight these energy-policy questions have in the GDR, and what solutions are being offered.

1. Energy Conservation

For some years now, the demand for an "efficient use of energy" could be found frequently in the economics literature, in political speeches, and in calls for competitions in the GDR. As early as in the 5-year plan period of 1971 to 1975, in the GDR's industrial sector a lowering of the specific energy consumption (= energy expenditure per unit of product) by an annual 5 percent was scheduled--and a lowering of 4.6 percent was achieved. At the Ninth Conference of the SED Central Committee (28/29 May 1973), Gerhard Schuerer had described the solving of the problems of the fuel and power balance as a task of the first priority. At the same conference, Honecker demanded that the lowering of the energy expenditure be speeded up.

Since then, such calls have been circulated again and again. The directive of the Ninth SED Party Congress of 1976 set the task "of lowering the intensity of consumed energy by 4.7 to 5 percent annually, and the electric-power intensity by 2.8 to 3 percent annually." Since 1970, the GDR Council of Ministers has held several seminars on questions of the efficient use of energy, at which the possibilities for energy conservation have been discussed. The sixth such seminar took place on 24 November 1978 in Halle. Here, the energy minister Klaus Siebold (since dismissed) announced that the demand for a decrease in the intensity of consumed energy by 4.7 percent has been realized "in recent years." The specific expenditure of primary energy (for a given volume of gross output) has been decreased by about a fourth since 1971, and with an additional energy consumption of an average of only 2 percent, an annual economic growth of 5 percent has been realized.[6]

Of course, at the beginning of the 1960's the specific energy consumption in the GDR was considerably above that of other highly-developed industrial countries. In 1975, 6.6 tons of hard coal units were needed per GDR citizen (FRG: 5.6 tons of hard coal units per citizen). The GDR industries required about 20 percent more energy for their output than enterprises of other industrial countries for the same volume of production.[7] An awakening, economically motivated energy consciousness at this time enabled the GDR to become aware of many solutions which were more favorable in terms of energy use, through a technical comparison with foreign products and production procedures.

Even though production procedures with a high energy consumption--such as electrochemical processes--have great significance in GDR industry, the figures in question reveal an extravagant approach to energy in industry, which however should not be attributed merely to a too-weakly pronounced "energy consciousness." Other causes are the marked obsolescence of the machinery and installations[8] and a preference for material conservation over energy conservation: Whereas as far back as in the 1960's the raw-material supply showed shortages and thus material economy (that is, conservation of raw and industrial materials) has had a great weight for a rather long time already, the shortages in the energy supply have been stressed once more in the discussions only since 1970. When in the 1950's considerable exertions in power plant construction had consolidated the electric power supply, in the 1960-1970 period investments in the fuel and electricity industries dropped from 38.5 percent (1960) to 19.5 percent (1970) of total investments in the GDR economy.[9]

The efforts to conserve energy were aimed at first only at saving investment capital, not at conservation of primary energy sources. A long-range securing of the energy supply was to be achieved through increased oil deliveries from the Soviet Union and through the development of nuclear energy.

Meanwhile, energy conservation has become entirely an independent goal of technical development, aimed at decreasing imports of energy sources (or at causing them to increase more slowly) and directed toward conserving domestic resources. But even today the minister for material management refers to energy conservation only as a side issue.[10] He is evidently not ready to help bear the responsibility the minister for coal and energy has for the implementation of a thrifty employment of energy.

Compared to the public and industrial sector, there is little chance that private consumption plays the decisive role in the GDR's attainment of a top position in international energy-use comparisons, although an increasing car-buying, the new construction of dwelling units, and their growing furnishing with household electric appliances are also increasing private demand for motor fuel, central heating, and electric power. So far, the furnishing of households with especially high energy-using consumer goods (automobiles, color television sets, freezers, automatic washing machines, dishwashers, and so forth) is far from having reached the level of the FRG. Moreover, the dwelling units are smaller on the average (58 m^3 compared to 77 m^3 in the FRG), and less often do they have central heating and baths,[11] so that even given a smaller efficiency for the appliances and perhaps less heat insulation of the houses, the greater consumption is not likely to be caused by private households.

In 1978, all together over 2 million terajoules (492,000 teracalories) of consumed energy were used in the GDR (in the form of various sources of energy such as electric power, steam, gas, motor fuels, and so forth), of which 40.6 percent was used for industrial thermal processes (not including space heating), 35.6 percent for space heating, 14.8 percent for driving vehicles, 6.2 percent for driving machinery, and 1.9 percent for illumination.[12]

Energy Conservation in Industry

Despite the increase in energy efficiency achieved so far in the GDR's industry, the potential for conservation in this area is far from having been exhausted as yet. Siebold pointed out that in energy-intensive industrial branches (chemical industry, coal and electricity sector, ore mining, potash industry, metallurgy), only about half of the consumed energy is converted in "enterprises which operate in an exemplary manner in terms of energy use," and in other industrial branches such as in construction and transport, this fraction lies below 30 percent, while in agriculture it is even below 2 percent. Inadequate above all is the efficiency of steam and electric-power generators in smaller and average-sized enterprises--it could be raised considerably through better provisioning with measurement and control equipment. Also, the utilization of secondary energy sources (waste heat!) still offers--according to Siebold--many reserves.[13]

The engineering organization of the GDR, the "Chamber of Technology" (KDT), is endeavoring to stimulate its work groups and thus also all its members to take initiatives on energy conservation,[14] and energy-economy rationalization is given prominence as an especially important goal of engineering activity. The KDT is concentrating its efforts on measures in five areas of emphasis, which at bottom represent conclusions derived from the assessment of the situation by the former energy minister. These focal points are:

- Heat generation in combination with electric-power generation;
- Space heating;
- Industrial furnaces, gas burners, firing installations;
- Agricultural technologies;
- Secondary energy utilization.

For each of these complexes, the KDT has formulated special tasks which, gradually but on a broad front, can help to conserve energy. The KDT also regards its professional associations and working groups as the suitable institutions for making interdisciplinary cooperation possible in the energy-economy sector.

In 1978, an article was presented from the GDR Ministry for Coal and Energy which sums up in 13 points the methods and measures being employed in GDR industry for an efficient use of energy.[15] In this article, Doehler distinguishes between measures for the improvement of the system of management and planning for enterprises in the power-producing industry, and measures by means of which the personal initiative of technical personnel can be stimulated to achieve a lowering of energy losses.

The first group of measures includes, according to Doehler:

a) A more strict planning of energy requirements. A detailed energy plan is to prescribe obligatory quotas in the form of national standards and targets of specific energy consumption. In 1979, in about 1,700 enterprises a continuous checking of these energy projections was introduced through monthly or quarterly renderings of accounts.[16]

b) In the case of innovations, the employment of energy-conserving designs, procedures, and technologies is to be implemented as early as in the phase of research and development. Chemical plant construction has been operating according to this principle since 1972 already, and it has achieved considerable energy savings for the operators of the plants which have been delivered over.[17] Basic research and development projects for improving the energy efficiency of energy-intensive processes are today a component of the national plan and are centrally coordinated.

c) About 460 energy consumption norms are prescribed in over 40 GDR standards, which set the criteria for the maximum permissible energy consumption for all basic energy-intensive installations and production processes. These standards have been worked out through a cooperative effort between the Institute for Energetics/Central Office for Efficient Energy Use in Leipzig and the appropriate technical groups in each case, and they are to be revised at fixed intervals and accommodated to technical developments.

d) Production processes are being scientifically analyzed, in order to (among other aims) localize and remove the causes of energy losses. Such "process analyses" have been carried out in, among other areas, the chemical industry and in the Structural Clay Products and Heavy Ceramics VVB.

e) In 1970, bezirk and kreis energy commissions were formed, which above all are supposed to monitor the fulfillment of State requirements with respect to energy economy and to organize an exchange of experiences between enterprises and other institutions.

f) Since 1976, industrial prices for energy have been adjusted continuously to increased import prices for energy sources.

g) The fuel and electricity combines have set up "process-oriented rationalization services" which advise and help large-scale consumers in their energy-related rationalization of machinery and installations.

Grouped together in the second complex of measures were those which are supposed to enable the people concerned to extensively conserve on energy, and moreover which are aimed at fostering a corresponding motivation to do this.

a) Since 1970, six central seminars on "efficient energy use" have been held by the GDR Council of Ministers, in which top personnel of industry and other economic sectors discussed goals and tasks with respect to raising the efficiency of energy consumption.

b) Subsequent to the central energy seminars, in all economic sectors seminars were held specific to these sectors, under the direction of the appropriate minister, for passing on the results of the central seminars to the specialists (above all, the chief energy scientists of the enterprises).

c) On the basis of standards and targets which are renderable in accounts, efficient energy use is to be stressed in socialist competition in all the enterprises and combines, and in this way it is to be firmly impressed upon the minds of all the working people.

d) Conferring of the national title "enterprise operating in an exemplary manner in terms of energy use." Over 300 enterprises have already been awarded this title. An exchange of experiences is to be stimulated as well by this award, so as to bring other enterprises and institutions in line with the consumption level of the thrifty enterprises.

e) A broad further-education program has been developed for energy-use training. In 1978, further education courses at 10 different advanced schools were held for about 6,000 technical personnel in energy-intensive combines and enterprises. Since 1975, 800 energy economists have completed a 6-week course at advanced and technical schools for energy economics. Moreover, there are also further-education events which have been put on by the KDT and the fuel and electricity combines, in which another 10,000 energy economists and technicians have taken part.

Energy Conservation in the Private Sector

In the private sector, the greatest energy-saving potential lies in reducing the heat consumption for space heating systems, because it is here that about 77 percent of the private energy consumption is needed.[18]

In home-building in the GDR, only in the last few years has attention been paid to the heating expenditure. Therefore, measures for the reducing of heating demand could lead to high energy savings: It has proved possible to lower the calculated annual heat consumption of a new structural design introduced in 1978 by 43 percent compared to a newly built dwelling of 1975. This saving was achieved not only through better thermal insulation, but also through the attachment of shutoff valves on heating devices and through external-temperature dependent regulation of heating systems. Just a few years ago, in many new houses the opening of windows was the only provision made as a means of heat regulation.[19] Since then, efforts have been made to optimize their protection against heat loss--for example, through the incorporation of multilayer boards as outer-wall elements or thermopanes for the windows. Moreover, the home-building program of the GDR also provides for having new houses in conurbation areas connected up to district heating systems to a large extent.

The School of Architecture of the GDR is investigating the possibilities of a lowering of heating energy consumption in new and rebuilt structures. The crux of this research program is to improve the thermal properties of buildings through greater heat insulation--for example, more insulating of the roofs and outer walls and a suitable arrangement of the windows.[20]

The lowering of the heating expenditure is also being pursued in industrial construction, but here in addition to the introduction of adjustable accessories, the installation of new types of heating systems (for example, beam plates as radiant ceiling heating units) is also playing a role.

The KDT is supporting the efforts under way to make space heating more efficient, among other ways through exerting an influence on quality control among the subcontractors, and in the execution of the construction work: Heat-conducting portions in the structure or failures of regulating equipment could detract considerably from the economizing effect.

However, the activities of the KDT on reducing the energy demand in the private sector are not limited to space heating, but also include efforts to reduce the electric power consumption of household electric appliances, among other ways through the development of new household appliances on the basis of microwave technology or inductive heating,[21] for the purpose of lowering the overall private electric-power consumption.

Finally, the development of heat pumps and an investigation of their fields of application have also been incorporated into the program of the KDT. This means that the working bodies of the KDT (professional associations and scientific sections) are to support relevant research topics and submit their own contributions.

2. Petroleum and Natural Gas Supply

The GDR gets about 90 percent of its petroleum requirement from the Soviet Union; for 1979, the delivery of 18.5 million tons of oil (800,000 tons more than in 1978) from the USSR has been contractually stipulated.[22] The general director of the Schwedt Petrochemical Combine stressed, on the occasion of the signing of this delivery contract, that the Soviet Union's readiness to make such deliveries represents a quid pro quo for the growing level of investments by the GDR in Soviet oil fields and its supplying of oil-refining equipment to it. The high percentage of oil supplies from the USSR has considerable financial advantages for the GDR, because the prices agreed on in the CEMA follow the world-market prices only after a time lag: The CEMA price arises through an averaging of the world-market prices of the previous 5 years, and thus for its customers in the CEMA countries, the Soviet Union's prices remain 30 to 40 percent below the price increase on the world markets.[23]

In 1976, 8.8 million tons of heating oil were produced in the GDR--that is, about 50 percent of the total petroleum consumption went for heat recovery.[24] Since 1970, heating oil production has risen in excess of planned levels. Inasmuch as striving for a higher percentage of vehicle fuels and base materials for the chemical industry has frequently been a topic in the technical literature,[25] the reason for the high heating-oil output must be sought in the technology being used. With the crude-oil refining plants of the GDR, components which boil above 350°C can no longer be converted into motor fuel or chemical raw materials. In 1978, an increase in the yield of diesel fuel at the expense of heating oil by 130,000 tons (that is, about 2 percent of the heating-oil generation) was made possible only after altering the standard for diesel fuels: Their cold-temperature characteristics had to be improved through the employment of special additives.[26] The high percentage of heating oil in this line of products points to a high proportion of low-volatility components in the crude oil used.

Prof Nowak of the Central Institute for Organic Chemistry of the GDR Academy of Sciences has stressed the necessity of converting heating oil into lower-boiling hydrocarbons. Only in this way, he said, can the increasing requirements of the chemical industry and of transport be satisfied.[27] Accordingly, the GDR's heating-oil supply will distinctly decrease when operations begin at the cracking and aromatic-compounds complex for upgrading vacuum and middle distillates which is being built at the present time by Japanese firms in Schwedt.[28] Here, higher-boiling components of the crude oil can be further converted into motor fuels and chemical raw materials.

The needs of transport are the most important rival for a material-economy utilization of petroleum products. In the State-owned motor vehicle transport sector, efforts are now being made to avoid empty runs (among other ways, by optimization of vehicle movements with the aid of electronic data processing), to achieve a greater utilization of the motor vehicles, to regularly service the engines, and so forth. In this area, savings of 2.4 percent annually are considered to be possible.[29] Private motor fuel consumption--with about 800 liters per car annually[30] and a total number of automobiles of about 2 million cars (1976) as well as 1.3 million motorcycles--is less than in other industrial countries. High gasoline prices and the existing speed limits, as well as the very high prices for high-powered cars, have always kept private motor fuel consumption at a low level.

Gas Consumption

The available data on the gas economy of the GDR, especially on natural gas extraction and imports, are not very precise, especially since in past years considerable discrepancies have repeatedly appeared between the planned consumption levels and the amounts actually made available.[31]

According to data of the DIW [German Institute for Economic Research], in 1975 there were 11.2 billion m^3 of natural gas available in the GDR, and with this amount 6.9 percent of its primary energy requirements were met. Some 8 billion m^3 of this came from GDR wells. Added to this in 1975 were also 5.1 billion m^3 of coal gas generated from brown coal, about half of it coming from the Schwarze Pumpe Combine.[32] GDR planning is not providing for any notable increases in natural gas consumption up to 1980. Domestic output is rising only slowly,[33] and imports from the USSR are being increased only slightly.[34]

The natural gas which is extracted in the GDR has a rather low calorific value, in that it consists of nitrogen to a considerable extent (up to 50 percent). Therefore it is not very suited to production processes which have high energy requirements, but is predominantly used for heat generation and in part also for electric-power production. However, natural gas combustion renders possible a utilization of higher-grade fuels elsewhere, and moreover it decreases the environmental pollution. The imported Soviet natural gas is also used for industrial processes, among other ways in fertilizer production, in the glass industry, and in metallurgy.

3. Utilization of Brown Coal

In 1960, solid fuels still made up 97 percent of all primary energy sources in the GDR, and brown coal alone supplied 87 percent of its energy requirements. By 1978, these percentages had dropped below 70 and 65 percent respectively.[35] In 1971, the mining of run-of-mine brown coal reached its maximum, with almost 263 million tons, and in the following years it was below 250 million tons. Since 1977 it has risen once again, and at the present time 690,000 tons/day (= 252 million tons/year) are being mined. In 1977 about 84 percent of the electricity generation was based on brown coal.

At the Ninth Central Committee Conference in December 1978--that is, even before the cold snap--Politburo candidate Werner Walde, SED bezirk secretary in Cottbus, drew attention to supply shortages in brown coal. A critical situation has ensued, he said, because brown coal consumption had risen beyond the planned extent, because an adequate stockpiling had foundered on transport problems, and because there had been weather-caused shortfalls--Walde was referring here to thunderstorms in August 1978.[36] Evidently, the output shortfalls early in January were only the last snag which brought to collapse a supply system which was in a lamentable state in any case.

The replacement of energy minister Siebold by his first deputy, Wolfgang Mitzinger, which was decreed at the Ninth People's Chamber Conference on 28 June 1979, can probably be explained as the result of these structural weaknesses in the brown-coal supply system and the thereby resulting temporary breakdown of the electric-power supply. The misjudgments of Siebold, mentioned as grounds for relieving him, which had to do with the distribution of the electric-power shortfall (power disconnections at the wrong station[37]), typify a supply system whose gaps simply could no longer be plugged at the occurrence of an emergency.

To be sure, one cannot help noticing also that brown-coal extraction in the GDR is encountering natural limits: Deposits already developed are running out, and new strip minings present difficult geological and hydrological problems (in particular, deeper overlying rock). Since 1970, the expenditure for the extraction of the same amount of coal has increased by about a third. In 1980, the mining of a ton of coal will require the removal of 4.8 tons of overburden and the lifting of 6 m^3 of water.[38]

The GDR holds the top place in the world in the relative importance of brown coal mining: It generates 28 percent of the world's production, but it possesses only 1.8-2 percent of the located world reserves.[39] After 1980 a raising of the annual extraction is again planned, to about 270 million tons a year, and after that any further increase in the country's energy requirements must be made up through other sources of energy. However, brown coal will remain the most important primary-energy source of the GDR for a relatively long time yet--assuming an unchanged consumption, the reserves will last approximately another 80 years.

The research expenditures for coal chemistry have also been intensified further, to allow a return to coal as a material base in the chemical industry, if necessary.[40] Although an all-out revival of coal-tar chemistry is not expected in the near future, in the long run this cannot be excluded.

Environmental Aspects of Brown Coal Use

Connected with the extensive exploitation of the brown coal deposits in the GDR are various specific environmental problems: The depletion of the countryside by strip mines, adverse effects on bodies of water, and pollutant emissions into the atmosphere. The stemming of these adverse stresses is the central subject of the Department of Environmental Protection in the Ministry for Environmental Protection and Water Management.[41]

Energy economists in the GDR take the viewpoint that the development of the fuel and electricity sector and the environmental-protection tasks resulting from this form a single unit: "An isolated planning of environmental protection in the sphere of the fuel and electricity sector is wrong in principle under socialist relations of production."[42] The professional educational background of the graduate economist Hans-Albrecht Luetke, head of the Department of Environmental Protection in the Ministry for Environmental Protection and Water Management, surely also helps to ensure that economic aspects will not be overlooked in the implementation of ecological demands.

Accordingly it can be assumed that environmental protection measures in the GDR's economy have good chances of being realized above all when they require only a small expenditure, or even promise economic advantages. The proposals and exertions of the power-plant builders and of the environmental ministry are tending along these same lines.

The recultivation of former strip-mining lands is characterized as being an "indispensable improvement measure in brown coal mining under socialist relations of production."[43] The great expenditure required for this is justified by the argument that besides an economic utilization of the reclaimed areas, in addition an "intangible gain" arises, because recreation areas can be thereby developed. But one must also realize that the preservation of the agricultural and forest land reserves is a main function of the environmental ministry.

Adverse effects relating to water arise through the lowering of ground water together with the development of strip mines, and because of water requirements for brown coal preparation (briquette production) and as coolant water in the power plants. The lowering of ground water is ignored in the surveys on environmental protection; it is evidently put up with as a temporary impairment (although lasting over many years, until the termination of the coal mining). An attempt is being made to stem any polluting of natural bodies of water by waste water through suitable measures (purification plants, water-conserving technologies). In this area there are economically advantageous effects, since water users who are situated downstream can cut down on purification costs if less polluted waste water has been passed into the streams.

The pollution of water bodies by the waste heat of power plants is evidently looked at less critically. The utilization of waste heat (for example, for heating plants) is discussed above all in terms of energy conservation, in connection with which--as a tribute paid to environmental protection--the use of waste heat is also recommended whenever the expenditure is not completely made up for by the saving in energy costs.

In brown coal processing and combustion, a considerable amount of solid and gaseous pollutants is liberated. Today, the installation of electrostatic precipitators for retaining solid dust particles is generally common practice in GDR power plant construction. But occasionally these precipitators are put out of action, in order to increase the output.[44] However, a desulfurization of flue gases, which could eliminate one of the most important pollutants (sulfur dioxide), is by no means a foregone conclusion. It is true that a high sulfur dioxide concentration in the off-gas requires high off-gas temperatures, to avoid sulfuric acid being separated out already in the boiler or the smokestack--that is, there is also an energy-economy interest in the removal of the sulfur dioxide. The Institute for Energetics in Leipzig has now developed a method which combines energy conservation and environmental protection: An addition of limestone powder into the firebox. By this method, which has also been investigated and applied in other countries, a portion of the sulfur can be bound as calcium sulfate, whereby the sulfur oxide content in the off-gas is reduced. This procedure is to be introduced in all brown coal power plants in the GDR. However, the sulfur-oxide polluting of the air is not radically reduced by this, because only a portion of the sulfur oxide is bound, and moreover other enterprises cannot use this method. Therefore, another point of main effort of the environmental ministry remains relevant: Development and implementation of measures for adapting agricultural and forest production to the given pollution situations, for example through the introduction of resistant crops.

The increasing amount of overburden of deeper-level strip mines and the high ash content of many brown coals form the point of departure for another main task in GDR environmental protection: Extensive exertions are being made to utilize waste products as secondary raw materials. In this connection, the relevant work has as its focus the selective extraction of sand, gravel, and so forth from the overburden and the employment of the ash as building material.

4. Prospects for Nuclear Energy

The electric-energy generation of the GDR amounted to almost 96,000 GWh in 1978, and thus it has doubled within 15 years. In the first 6 months of 1979 there was a further increase of 1.5 percent. For the coming years a steady increase in electric energy demand is assumed.[45] This additional demand cannot be satisfied much longer--even with an optimization of the energy output of conventional power plants by means of technical improvements--through a further expansion of brown-coal power plants.

This gap in the ability to satisfy demand is to be closed through the construction of nuclear power plants. Leading scientists of the GDR who concern themselves with energy questions regard nuclear energy as the only alternative to fossil sources of energy, and a supplementing of the energy supply system through the construction of atomic power plants is characterized as "an urgently necessary step."[46] Arguing to the same effect is the president of the Soviet Academy of Sciences, Alexandrov, who views the rapid development of nuclear energy on a large scale as "the only way to solve the energy problem."[47]

In all the CEMA countries the policy makers are basing their energy policy on this scientific dogma: They have resolved to implement an accelerated development of atomic power plants. For the joint utilization of new nuclear power plants, the interconnected electric-power system of the East European CEMA countries (including the western part of the Soviet Union) is also to be expanded. A corresponding agreement was signed during the 33rd CEMA Conference on 28 June 1979 in Moscow.[48] The principal item in this interconnected system will be a 750-kV long-distance transmission line from the USSR into the CSSR and in the direction of Hungary.

In the GDR, there are two nuclear power plants in operation at the present time: The installation in Rheinsberg has been operating since 1967, and it is delivering 70 MW to the public power distribution network, although it is used primarily as a research and training facility. The only large nuclear power plant in the GDR, with three reactor units having a power output of 440 MW each, is located at Lubmin near Greifswald, and here a fourth 440-MW unit is to go into operation in 1980. A further expansion is planned, to 3,250 MW by 1985. A second nuclear power plant near Stendal is to receive (according to Fuchs and Schumann) the 1,000-MW pressurized water reactor unit newly developed by the USSR, and construction is scheduled to take place within the 5-year plan period of 1981-1985.[49]

Safety Discussion

It seems that among the GDR population there is not much worry about the dangers from nuclear power plants. To be sure, questions about the safety of this technology are raised, as can be learned indirectly: Thus, in reply to readers' queries, Prof Flach, director of the Central Institute for Nuclear Research, specifically referred to the fact that the State Office for Atomic Safety and Radiation Protection is closely monitoring compliance with the strict regulations on the containment of radioactive substances, and he also commented on the safety of depositing radioactive wastes.[50] It is possible that following the accident at Harrisburg--which although scarcely noted in the GDR media, has become known in detail in the GDR as well of course, via FRG television--questions about the safety of nuclear energy have also increased in importance among the GDR's population. To be sure, Wolfgang Harich, who has pleaded for better environmental protection in the GDR, did not detect anything of this. "I have been in the neighborhood of the atomic power plant in Greifswald, and this subject is of no concern whatsoever to the residents. There, I was all alone in my opinions. The people say that with them quite different questions are important, such as the fact that they are unable to come by a certain type of screw," he declared in an interview.[51]

To be sure, for some time now these safety problems have been more keenly debated among specialists. In 1977, Fuchs/Schumann had still regarded the safety of nuclear power plants as first and foremost an economic problem; with them, the reliability and degree of avilability of the power plant facilities was the main consideration. It was postulated that "the task of reactor safety consists in guaranteeing a trouble-free operation--that is, in preventing situations which can lead to accidents."[52] Early recognition of failures in all system components was given the greatest importance. Barriers against the escape of radioactive substances were considered necessary only so long as the measuring techniques for recording the course of the process and the operational experiences were not yet sufficient to rule out every malfunction. This philosophy also stood sponsor to the construction of the Soviet nuclear power plants, whose safety equipment in no way attains to the usual standard in the West.[53] On the other hand, Fuchs/Schumann accentuated the environmental compatibility of atomic energy during trouble-free operation: There are hardly any waste gases, liquid wastes, or noise, and the emission of radioactivity can be disregarded in view of the considerably higher natural radiation exposure. Thus, the only environmental problem which remains is the removal of the non-utilizable heat, but this likewise arises in the case of conventional power plants. The disposal and final storage of radioactive residues is--according to Fuchs/Schumann--"solved in principle."

Other authors see safety problems in a different way. For example, Adam, director of the Department of Energy Conversion at the Technical University of Dresden and a leading expert on nuclear power plant safety in the GDR, pointed out in 1977 that attention must be paid to both emotional reservations which come from atomic energy's military bias and also scientific considerations about possible dangers to the population because of the "sizable hazard potential of a nuclear reactor."[54] Adam draws attention to the international trend toward including in the safety considerations as many conceivable sources of an accident as possible which can result in a destruction of the reactor core and the release of fission products (airplane crashes, sabotage, chemical explosions, and so forth), and the trend toward setting up safety models accordingly. He said that the effort is in the direction of steering expenditures for the safety of nuclear power plants "toward amounts which are simply more acceptable to the society." The overall risk, he said, is the smallest of all civilization's risks, because here "extensive safeguards which are exemplary for all of society" have been developed. But, he said, the state of knowledge about possible courses taken by accidents must be enlarged considerably more if one wants to build nuclear power plants on the outskirts of a city or for the purpose of process-heat generation in large enterprises; investigations on reactor safety would continue to require a large research expenditure. Such investigations are being carried out at the department which Prof Adam heads.

G. Ackermann of the Advanced Engineering School at Zittau also referred to increasing demands for guaranteeing nuclear environmental safety.[55]

He regards as a focal point and as essential a periodic materials inspection of the reactor pressure vessel walls and of the primary loop, so as to prevent ruptures of materials during operation. These checkout tasks for maintaining nuclear safety decrease the reactor availability by about 10 percent, but this expenditure, he said, is absolutely necessary if even longer outages with possibly serious consequent damage are to be avoided. For the future, Ackermann anticipates a further development of nuclear safety technology, with improved solutions for emergency cooling systems and the safety containment, especially in the event that the density of nuclear power plant sites increases.

The discussions on nuclear energy being held in the West are also followed in the GDR, at least by the specialists,[56] and these debates are likely to strengthen the position of safety-minded reactor technicians. Even in the case of the Soviet Union, it is questionable whether the line of argument of the Soviet academy president Alexandrov--who suspects machinations of the petroleum monopolies behind the protests against nuclear power plants in Western countries[57]--can find a consensus among the specialists. For the GDR, this question must be answered in the negative, since here safety problems concerning nuclear power are discussed in the technical literature without such a controversial argument, and with clear efforts to find measures to reduce technical risks.

Nuclear Heating Plants

In the future, energy policy makers from CEMA countries also want to employ nuclear energy for supplying heat.[58] A heat-power cogeneration is being discussed, but in the forefront of considerations is the construction of special nuclear power plants in conurbation areas. In the USSR, work has already begun in the cities of Gorki and Voronezh on constructing nuclear heating plants,[59] and by 1990 "several hundred localities in the USSR" are to be supplied in this way with heat from heating plants.

At a CEMA seminar on problems concerning the development of reactor plants for heating purposes in November 1977 in Moscow, GDR scientists also presented study results.[60] A coupling of nuclear heating plants and coal heating plants is recommended for the GDR, with the nuclear reactor satisfying the base load. Such combinations should become economical at thermal powers of the nuclear reactor of over 100 MW, if the site of the plant is not more than 10 km away from the consumption center.

It is believed that safety concerns vis-a-vis the setting up of nuclear heating plants in the immediate vicinity of heavily populated areas can be dispelled through technical measures. The ideas expressed tend along the same lines as the demands raised in the FRG with regard to the construction of nuclear reactors in general--that is, complete automation of the reactor control and regulation system, additional safeguards against a release of radioactivity even upon a rupture of the reactor vessel, as well as the installation of further engineered safeguards such as, for example, core-catchers. Moreover, it has been proposed that nuclear heating plants be built according to a half-underground method of construction--that is, to bury within the ground the systems especially likely to pose dangers (the entire first and second reactor loops), and to build above ground only the remaining (conventional) components.[61]

These studies are only theoretical ideas for the GDR so far; political decisions on behalf of a trial realization of such ideas or more far-reaching plans are not known.

Breeder Reactor Projects

Nuclear fission reactions can only furnish a notable contribution to the energy supply in the longer run (that is, over several centuries) if not only the fissionable uranium occurring in nature is used, but in addition fissionable material is generated in "breeder reactors." In the CEMA countries the accelerated development of nuclear fission technology is being planned, and consistent with this, the development of breeder reactors is also being speeded up. A "Scientific-technical Coordinating Council for Fast Breeder Reactors," established in May 1972 as a part of the Standing Commission on Atomic Energy of the CEMA, harmonizes the relevant research work. In addition to the USSR, also involved in this sphere of work are the GDR, the CSSR, Poland, and Hungary.[62]

Central to this research work are breeder reactors with sodium cooling. However, at the present time it cannot be foreseen when (or even if) the sodium breeder will be introduced on a large scale in the CEMA countries. Experiences with the existing test facilities have led to the recognition "that a considerable development expenditure will still be necessary before it (that is, the sodium breeder reactor) can be employed for economic electric-power generation."[63] There are difficulties not only with the sodium cooling technology (here above all in connection with its coupling to the working cycle), but also with other, system-linked safety problems which are not yet satisfactorily solved. Rudi Rockstroh of the Central Institute for Nuclear Research at the GDR Academy of Sciences in Dresden characterized the sodium breeder as the "most promising version of the fast breeder reactor," but he considered it essential for there to be further developmental work on the fuel system, on the physics involved, and on the safety of the fast breeder--that is, on all the important elements.[64]

The difficulties arising in the development of sodium breeder reactors, which have probably been underrated previously, have again brought into the discussions the concept of gas-cooled breeder reactors. Breeder reactors with gas cooling must operate under high pressures--because of the unfavorable heat-transfer properties of gases--and they need large, expensive heat exchangers and gas circulators. But advances in high-pressure technology have brought new incentives, especially since experiences with the complicated sodium cooling have stimulated the search for alternatives.

Since the end of the 1960's, more work has again been done on gas-cooled breeder reactors in the CEMA area. The reticence of reactor builders toward this reactor type which can still be seen today (in Western countries as well)--a type which in the opinion of Dresden scientists poses a number of inherent safety problems[65]--has been accounted for by Adam with the argument above all that the high financial expenditures needed for a breeder reactor development, following the decision on a particular concept, must lead to a disregarding of all other construction principles, because the simultaneous supporting of a second building principle could not be financed. But Adam expects that there will again be support for gas cooling in the future. However, so far various developmental courses are being pursued in this area as well. Tests are being conducted primarily with two coolants: In Minsk, tests are in progress with nitrogen tetroxide (N_2O_4) as the coolant, whereas scientists at the Technical University of Dresden favor a helium cooling, because the toxicity and corrosivity of the nitrogen oxide pose new problems. But in the CEMA sector, so far no lines of development have been laid down definitively for gas-cooled breeder reactors. Within the GDR also, differing standpoints are being taken on the prospects of gas-cooled breeder reactors and further support for their development.[66]

By no means can an employment of gas-cooled breeder reactors in the GDR be anticipated in a foreseeable period of time, especially since--according to Rockstroh--compared to the sodium breeder there is a development lag of over 10 years.

5. Alternative Sources of Energy

An investigation into "alternative sources of energy" (that is, neither fossil fuels nor nuclear energy) has been long neglected in the GDR. At the 10th World Energy Conference in 1977, scientists from the GDR did not furnish any contributions to the discussion of Section 4, "non-conventional sources of energy--developmental studies." In this section, reports on nuclear fusion, solar energy, geothermal energy, wind energy, tidal and wave energy, the employment of heat pumps, and on energy storage were presented.[67]

In the GDR technical press, for some time now the relevant considerations and research work have been more frequently treated.[68] Willi Stoph has revealed that such projects can count on an increasing political support. "We consider it both necessary and appropriate to engage in joint efforts to find and utilize in our countries other energy sources besides the prevailing ones," he declared on 28 June 1979 at the 33rd CEMA Conference in Moscow.

So far, research on the utilization of solar energy has been on only a very modest scale in the GDR. Theoretical studies on the applicability of solar collectors have been presented by the Institute for Energetics in Leipzig and the Institute for Energy Supplies in Dresden.[69] In Freyburg/Unstrut, a solar collector system is in operation for the heating of an outdoor swimming pool, and in Halle three experimental homes which use solar technology are being constructed.[70]

These rudiments of a research and development activity for the utilization of solar energy are also in line with the level of development in other CEMA countries. The first solar research institute in the Soviet Union--which is concerned with the development of equipment for the conversion of solar radiation into utilizable forms of energy and which is to become the "center for the comprehensive investigation and utilization of solar energy" of the Soviet Union in the future[71]--was also set up only in 1979, at the Academy of Sciences of the Turkmen Soviet Socialist Republic.

References are made to other non-conventional sources of energy almost exclusively in reports on energy research in developed industrial countries of the capitalist world. A study on wind as an energy supplier[72] or a reference to the investigating of geothermal zones in the interior of the earth in CEMA countries[73] are singularities in the relevant literature of the GDR.

An article by academy member Alexander, director of the Central Institute for Electron Physics of the GDR Academy of Sciences, typifies a point of view which also finds expression in a similar way in many other commentaries. In a paper presented to the academy plenum,[74] Alexander had reflected on future energy supplies. He does not expect any substantial contributions to the satisfying of energy needs in Central Europe from a direct utilization of solar energy, the exploitation of agricultural wastes, water power, or wind energy. These forms of energy could furnish only modest contributions in the way of substitutions for conventional sources of energy. Alexander advocates only "relatively small-scale study programs on the utilization of solar energy for space heating, and wind energy in the coastal region," in order to arrive at a better assessment of the capabilities of these energy sources.

For Alexander, "nuclear energy remains the only real alternative for the replacement of fossil fuels." But, he said, in the longer run nuclear fission can only provide security for the country's electricity generation and heat supply if the nuclear fuel supply is guaranteed by means of breeder reactors. But still standing in the way of the employment of breeder reactors are technical problems (pilot power plants are just now under construction, and technologies for the reprocessing of depleted fuel elements have not yet been adequately worked out and tested) and safety problems (for Alexander, above all a possible misuse of plutonium). As a necessary complement to breeder reactor development, therefore, Alexander pleads for a "stepped-up technical development of controlled thermonuclear fusion." He says that in comparison to breeder reactors, a fusion reactor has considerable safety advantages, although there is a development gap vis-a-vis the breeder reactor of about 30 years. Alexander does not mention that any predictions about the employment of nuclear fusion as a viable energy source still rest on very weak foundations. "To control nuclear fusion is as much as ever an unsolved problem" writes the Soviet Nobel prize winner Bazov in a recent publication.[75] Even Bazov assumes that nuclear fusion "will gradually arrive at the stage of scientific-technical projects," but he reveals how ill-defined such projects still are today.

Another alternative to the breeder reactor program would be a breeding of fissionable material by means of high-energy accelerators. Prof Ranft from the Physics Department of the University of Leipzig has thought through the theoretical possibilities of this technology,[76] but his considerations have not led to any perceivable consequences for the energy policy of the GDR.

6. Summary Assessment

The 33rd CEMA Conference has shown anew that the procurement of energy for consumption purposes is just as much one of the central political problems in the CEMA countries as it is in the Western industrial countries.

The GDR leadership is striving in three ways to ensure its energy supply:

1. Implementation of a sparing energy-use policy in all sectors, through administrative measures and through stimulants to a thrifty energy consumption on the job. So far, the GDR has not carried out price increase measures for the purpose of curbing private consumption of energy for heating and motor fuels, as were decreed in the summer of 1979 in various other CEMA countries.

2. Maximum utilization of domestic energy sources--that is, above all intensified mining of brown coal, despite geological conditions which are ever more difficult to deal with, and an increase in the extraction of natural gas. Also a component of this mental readjustment to using its own resources is the revival of coal research with an aim to its chemical-industry utilization.

3. Through participation in major projects in the USSR, the delivery capacity of the GDR's most important supplier of energy sources is being assisted. The GDR is furnishing industrial installations for its petroleum industry, it is participating in research work in reactor technology, including breeder-reactor technology, and it is helping

in the work on pipelines and high-voltage transmission lines which can transport energy from the USSR into other CEMA countries. These contributions by the GDR also help to maintain the Soviet Union's readiness to deliver such energy supplies, especially since this country includes in its planning certain ancillary supplies from the GDR for the development of its power-producing industries and thus is itself interested in an adherence to the economic agreements which have been made. At the same time, the GDR's exports of industrial installations are a payment for the energy imports.

In its longer-range planning, the GDR's leadership--in concurrence here with the USSR--is placing its hopes in nuclear energy, including the introduction of breeder reactors. For some time now, other alternatives to fossil energy sources have been more frequently treated in scientific publications, but they have only a very slight weight in its own research and development activities, and so far they have not played any appreciable role in deliberations on its energy policy.

To be sure, in the past it has turned out that long-range prognostications and plans for the development of a country's energy supply, especially for the employment of other sources of energy, have been associated with great uncertainties. Therefore the future structure of the energy supply in the GDR is difficult to predict, especially at a time when considerable changes in the use of the various sources of energy are looming everywhere in the world.

FOOTNOTES

1. NEUES DEUTSCHLAND, 27 June 1979, p 2.

2. Gerhard Schuerer, "Strengthen the Energy and Raw-material Base of Our Country," in: EINHEIT, 12/1978, p 1245 ff.

3. See Hans-Dieter Schulz, "The Winter Battle," in: DEUTSCHLAND ARCHIV, 2/1979, p 113 ff.

4. DER SPIEGEL, 31/1979, p 76 ff.

5. NEUES DEUTSCHLAND, 28 June 1979, p 6.

6. DIE WIRTSCHAFT, 12/1978, supplement.

7. According to calculations of the DIW [German Institute for Economic Research], Berlin; see "Handbook of the GDR Economy," Hamburg, 1977, p 126. The same figure was mentioned in 1974 on Radio GDR--see: "The Energy Economy of the GDR," Bonn, 1978, private printing of the All-German Institute-Federal Institution for All-German Problems.

8. See Manfred Melzer, "Efforts for a More Effective Employment of Capital in the Economy of the GDR," in: DEUTSCHLAND ARCHIV, 1/1979, p 46 ff.

9. Raimund Dietz, "Investment Policy in the GDR," in: DEUTSCHLAND ARCHIV, 4/1978, p 390 ff.

10. Wolfgang Rachfuss, "Raising Material Economy--Dictate of Scientific Judgment," in: EINHEIT, 7/1979, p 747 ff.

11. According to "Numerical Picture of the Federal Republic of Germany/German Democratic Republic--a Comparison," published by the Federal Minister for Inner-German Relations, Bonn, 1978, pp 59 and 63.

12. DIE WIRTSCHAFT, 8/1979, p 2.

13. DIE WIRTSCHAFT, 12/1978, supplement.

14. "Coordination Program for the Further Work of the Chamber of Technology in the Area of Energy-use Rationalization," in: ENERGIETECHNIK, 1/1979, p 3 ff.

15. Werner Doehler, "Methods for the Management and Planning of an Efficient Use of Energy and Their Economic Significance," in: ENERGIETECHNIK, 7/1978, p 266 ff.; see also IGW (publisher), "Wissenschaften in der DDR--IV Quartalsbericht, 1978" [Sciences in the GDR--Fourth Quarterly Report, 1978], Section Energetics, p 59 ff. A series of analyses and reports from the areas of society and science, Erlangen, 1979. These periodical reports of the IGW are cited in what follows as "IGW Quarterly Report."

16. Heinz Ziergiebel (= deputy energy minister), "Efficient Energy Use--Important Social Concern and Principle of Socialist Economy," in: ENERGIEANWENDUNG, 5/1979, p 161.

17. Prof Ploetner of the Chemical Plants VVB estimated the savings in the period 1972 to 1977 at 3.8 times this VVB's own annual needs. DIE WIRTSCHAFT, 12/1978, supplement, p 6.

18. "Coordination Program...," loc. cit. (footnote 14).

19. This is a characteristic example of the lack of coordination between material and energy economy: In order to save on shutoff valves, until a few years ago a significant additional expenditure of heating energy was tolerated. For the new regulation, see Werner Doehler, "Methods...," loc. cit. (footnote 15), p 270.

20. Wolfgang Stockloew, "Decrease Further the Heat Consumption for Space Heating," in: DIE WIRTSCHAFT, 12/1978, supplement, p 7.

21. "Coordination Program...," loc. cit. (footnote 14).

22. CHEMISCHE TECHNIK, 1/1979, p 50.

23. Joachim Nawrocki, in: DIE ZEIT, 14 June 1979, p 31.

24. For 1977, the Statistical Yearbook of the GDR no longer shows the heating-oil production.

25. See R. Liebold, "Amount Recovered in Oil Refining Raised," in: CHEMISCHE TECHNIK, 9/1978, p 485 f.

26. "More Diesel Fuel Through Shifting Boiling Ranges at the Petrochemical Combine Schwedt VEB," in: CHEMISCHE TECHNIK, 5/1979, p 268.

27. Nowak; Friedrich, "Why Lower-termperature Cracking of the Petroleum?" in: DIE WIRTSCHAFT, 7/1979, p 19.

28. CHEMISCHE TECHNIK, 4/1978, p 208.

29. Data from the Erfurt Transport Combine, see: DIE WIRTSCHAFT, 12/1978, supplement, p 6.

30. See "The Energy Economy of the GDR," loc. cit. (footnote 7).

31. Ibid.

32. "Handbook of the GDR Economy," loc. cit. (footnote 7), p 125.

33. Willi Stoph spoke in December 1978 before the People's Chamber of a target of 9 billion m^3 for the year 1979, in: NEUES DEUTSCHLAND, 16/17 December 1978, p 3 ff.

34. Plan: 21.6 billion m^3 in the period 1976-1980.

35. G. Flach; R. Rockstroh, "Energetics. Development-Structures-Prognoses," in: WISSENSCHAFT UND FORTSCHRITT, 1/1978, p 2 ff.

36. NEUES DEUTSCHLAND, 15 December 1978, p 5 f.

37. See DER SPIEGEL, 31/1979, p 67.

38. DIE WIRTSCHAFT, 7/1979, p 24.

39. Gerhard Schuerer, "Strengthen the Energy...," loc. cit. (footnote 2), p 11.

40. IGW Quarterly Report II-III/1978, p 87 f.

41. Hans-Albrecht Luetke, "Environmental Protection in the GDR," in: EINHEIT, 7/1979, p 130 ff.

42. Dietmar Ufer; Peter Hedrich; Wolfgang Kluge, "Environmental Aspects of Long-range Energy Economy Development," in: ENERGIEANWENDUNG, 6/1978, p 199 ff.

43. Ibid.

44. See EULENSPIEGEL, 8/1978, p 12.

45. W. Frischmann, "The Future of the Power Plants," in: TECHNISCHE GEMEINSCHAFT, 7/1979, p 23 f.

46. Klaus Fuchs; Guenter Schumann, "The Significance of Nuclear Energy in Meeting Our Future Energy Needs," in: ENERGIETECHNIK, 5/1977, p 185 ff.

47. Anatoli Alexandrov, "Scientific-technical Progress and Nuclear Energetics," in: PROBLEME DES FRIEDENS UND DES SOZIALISMUS, 6/1979, p 743 ff.

48. FRANKFURTER ALLGEMEINE ZEITUNG, 28 June 1979, p 11.

49. Announcement from the GDR Ministry for Heavy Machine Construction and Plant Construction, in: ENERGIETECHNIK, 4/1978, p 121 ff.

50. "Energies in the Service of Mankind," in: NEUE ZEIT, 23 April 1979, p 5.

51. DER SPIEGEL, 24/1979, p 74.

52. Klaus Fuchs; Guenter Schumann, "The Significance...," loc. cit. (footnote 46).

53. See Werner Gruhn, "Nuclear Power Plant Safety From the GDR Viewpoint," in: DEUTSCHLAND ARCHIV, 8/1977, p 806 ff.

54. Ernst Adam, "Trends in Energetics and Safety in the Nuclear Power Plant," in: WISSENSCHAFTLICHE ZEITSCHRIFT DER TECHNISCHE UNIVERSITAET DRESDEN, 6/1977, p 1215 ff.

55. G. Ackermann, "Analysis of Experiences in Operating Nuclear Power Plants With Pressurized Water Reactors," in: KERNENERGIE, 1/1978, p 8 ff.

56. IGW Quarterly Report II-III/1978, Section Energetics, p 79 ff.

57. Anatoli Alexandrov, "Scientific-technical...," loc. cit. (footnote 47).

58. See IGW Quarterly Report, I/1979, p 74 ff.

59. Anatoli Alexandrov, "Scientific-technical...," loc. cit. (footnote 47), p 750.

60. H. Munser; B Reetz; G. Schmidt, "Possibilities and Ways of Integrating Nuclear Heating Plants Into District Heating Systems," in: KERNENERGIE, 9/1978, p 278 ff.

61. E. Adam; M. Heitsch; R. Mueller; M. Schwarz, "Technical-economic and Safety Aspects in the Employment of Nuclear Heating Plants Under Conditions in the GDR," in: KERNENERGIE, 7/1978, p 209 ff.

62. KERNENERGIE, 1/1979, p 32 ff.; see also IGW Quarterly Report II-III/1978, p 81 ff.

63. Ernst Adam, "Trends...," loc. cit. (footnote 54), p 1218.

64. R. Rockstroh, "Nuclear Energetics," in: WISSENSCHAFT UND FORTSCHRITT, 5/1978, p 180 ff.

65. KERNENERGIE, 9/1978, p 275 ff.

66. See IGW Quarterly Report, I/1979, p 69 ff.

67. ENERGIETECHNIK, 3/1978, p 95 ff.

68. See IGW Quarterly Report II-III/1978, p 84 f.

69. ENERGIETECHNIK, 5/1978, p 162 ff.; ENERGIETECHNIK, 1/1979, p 29 ff.

70. Lothar Till, "Conversion of Solar Energy," in: WISSENSCHAFT UND FORTSCHRITT, 5/1979, p 194 ff.; see also: DIE WIRTSCHAFT, 12/1978, p 19.

71. WISSENSCHAFT UND FORTSCHRITT, 6/1979, p 226.

72. DIE TECHNIK, 4/1978, p 203 ff.

73. WISSENSCHAFT UND FORTSCHRITT, 1/1977, p 6.

74. Karl Friedrich Alexander, "Energy Sources of the Future," in: "Proceedings of the GDR Academy of Sciences, Mathematics-Natural Sciences-Technology," No 21 (1978).

75. N. G. Bazov, "Lasers Control Nuclear Fusion," in: WISSENSCHAFT UND FORTSCHRITT, 6/1979, p 225.

76. J. Ranft, "High-energy Accelerators as Energy Sources of the Future?" in: WISSENSCHAFT UND FORTSCHRITT, 1/1979, p 14 ff.

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TASKS FOR DEVELOPMENT OF ALUMINUM SEMIFINISHED PRODUCTS

Budapest MAGYAR ALUMINIUM in Hungarian No 11, 1979 pp 321-324

[Article by Laszlo Schippert: "Mid- and Long-Range Development Tasks in the Manufacture of Semifinished Aluminum Products"]

[Text] Aluminum is one of our rather important national treasures. Its effective utilization is an important economic policy goal and is one of the significant elements of our technical policy.

Since the 1962 ratification of the Hungarian-Soviet Aluminum Oxide-Aluminum Agreement, all phases of Hungarian aluminum industry have developed rapidly.

The data of the first table characterizes not only the dynamism of the development, but also testifies to the positive structural transformation as far as the aluminum industry is concerned. We are exploiting the national economy's aluminum resources in a continually more processed form, although at a slower rate than planned. Thus the transformation in this sense has an intensive character.

The development of semifinished aluminum products manufacturing and of the processing into finished merchandise correspond overall to the national economic requirements for structural modernization and selective industry development:

--It is being built on domestic raw materials basis and is aimed at exploitation at increasingly higher processing levels;

--its products are already saleable under favorable conditions on all markets. In addition to requiring a minimum of capitalist imports, it forms a reliable merchandise basis for the capitalist foreign currency balance of the national economy;

--the world level is approachable or achievable through further development of already existing capacities;

--the infrastructural resources of development are favorable;

--the economic advantages of socialist integration and capitalist cooperations can be utilized throughout the whole branch;

--the modern technologies and manufacturing experiences which evolved through the development may make intellectual and prime contractor exports possible, over and above satisfying the requirements of further domestic development.

The changes taking place in economic life are constraining us to examine this rather valuable and great energy content metal which is everywhere marketable--especially in the last two processing phases--favorably from the standpoints of material and energy economy, labor force supply and productivity.

Today it can already be stated that during the next time period it would be advisable to concentrate the activities of aluminum semifinished manufacturers (K+F) [research and development] on the following chief areas:

--on the development and propagation of alloys in the interest of converving raw materials and energy;

--on the reprocessing and putting back into circulation of aluminum scraps;

--on the manufacturing of increasingly more complete products;

--on increasing productivity.

Table I. Composition of Hungarian aluminum industry and increase in exploitation of the metal treasure

	1960		1970		1980		1990(Est)		2000(Est)	
Designation	1000t	%	1000t	%	1000t	%	1000t	%	1000t	%
Bauxite	1190	--	2022	--	3000	--	3500	--	4000	--
Derivable	198	100	337	100	526	100	614	100	667	100
Aluminum oxide	219	--	422	--	830	--	1000	--	1100	--
Aluminum derivable	109	55	221	66	426	81	500	51	550	82
Primary aluminum[1]	50	25	141	42	256	49	370	60	470	70
Semifinished products[2]	33	17	82	24	154	29	280	49	340	51
Preparation of completely manuf. merchandise[3]	42	21	101	30	200	38	280	46	350	52

Notes: 1. Includes metal smelted abroad.
2. Quantity excludes cast items.
3. Includes collected scraps utilized in raw materials basis for casting of completely manufactured merchandise.

Alloy Development Tasks

World trade experience indicates that above the annual $300 (calculated on 1970 dollar prices) per capita national income level the "raw material intensification" increase rises rapidly to the $2,500 per capita level, then it decreases. The second ahd third tables illustrate that in the MNK [Hungarian People's Republic] domestic metal consumption, primarily that of aluminum, is rather high.

Table II: Specific domestic material consumption (Kilograms per person)

Country	Year	Aluminum	Steel	Copper	Synthetic Materials	Cement
Hungarian People's Republic	1968	8.2	307	---	8.6	302
	1976	17.4	---	2.1	23.8	---
U.S.	1968	21.3	685	8.5	31.6	450
	1976	25.9	---	8.3	60.6	---
France	1968	6.3	359	5.9	21.0	506
	1976	12.0	---	6.9	48.0	---
Asutria	1968	6.3	300	4.2	21.2	620
	1976	10.6	---	3.9	43.3	---

Table III: Domestic material consumption (kg) per $1,000 (1970 dollar price level) of supplemented value (GDP) [gross national product]

Country	Year	Aluminum	Steel	Copper	Synthetic Materials	Cement
Hungarian People's Republic	1968	8.8	329	---	9.2	324
	1976	12.2	---	1.5	16.6	---
U.S.	1968	4.7	151	1.9	7.0	99
	1976	5.1	---	1.6	11.8	--
France	1968	3.3	188	3.1	11.0	265
	1976	4.6	---	2.7	18.4	---
Austria	1968	3.5	167	2.4	11.8	344
	1976	4.1	---	1.5	16.7	---

The high domestic consumption in itself is not a problem if it indicates that the metal reaches export with an even higher processing level as a finished product, and with appropriate effectiveness. There is a problem if, because of excessive predominance of the quantitative perspective, a still inappropriate interest system, scarcity of investment instruments, or occasional technical simplicity the selection of manufactured semifinshed products is inappropriate for modern material and energy economy requirements. The most visible indicator of this is that the proportion of semifinished alloyed/unalloyed (table 4) and especially tempered products we manufacture is lagging behind the international level. Thus, "the general strength" of our product selection is meager, leading to unnecessary material consumption. In exports it also often prevents the acquisition of a high sales price.

Table 4: The composition of aluminum semifinished product production in some countries in the middle of the 70's.

	U.S.	Japan	England	Sweden	Austria	Hungary
Alloyed (%)	70-75	70	55-60	55-60	40	23-24
Unalloyed (%)	30-25	30	45-40	50-45 [sic]	60	77-76

The data of table 4 clearly illustrates the unfavorable composition in the development of Hungarian aluminum consumption from an economy of materials standpoint. The low proportion of alloyed materials in semifinished products manufacturing can be explained only partially by the fact that we prepare large quantities of wire material, and that we export significant quantities of semifinished products. In addition to stimulating technical preparation and economy of materials, the efficiency of semifinished products and wire exports could be significantly improved.

From the perspective of explaining the alloyed/unalloyed product proportion, through convention we call unalloyed aluminum that virgin metal (or the products prepared from it) to which in working we do not add other metals for the purpose of alloying. (In this context, we are ignoring particle refining materials or microalloys of less than .1 percent).

Our goal, even from the standpoint of economics, in addition to our endeavors to increase the metal basis, is to consume the least possible material while effectively rezolving the identical technical tasks through proper quality selection, proper construction, sizing, etc during preparation. This would result in not only economy of materials but would also increase the modernness, and thus the competitive capacity of finished manufactured products.

In addition to the fact that aluminum has such good specialized properties (it is light, it is a good conductor of electricity and heat, etc), it is also available in sufficiently great quantities at economically acceptable prices. In almost every case, it is also important that the material utilized be sufficiently strong and load bearing. It follows from this that in a good many cases, in addition to preserving the good properties, the utilization of a stronger material makes the reduction of dimensions (thickness, diameter, etc) and therefore saving of material possible.

A generally proven method is that, working as closely as possible with the consumers, the target alloy which results in the best combination of properties for individual products with significant material requirements--also taking the manufacturing and volume requirements of semifinished product manufacturing into account--must be developed and entered into production.

The concept of target alloy must be interpreted as broadly as possible. In addition to the structurally very strong alloys, the specialized conductors (e.g. microalloys) and the enhanced Fe content high ductility materials belong therein.

Our task is to promote the transformation of the total materials composition of Hungarian aluminum semifinished and finished product manufacturing into a direction which would result in greater efficiency. The task is not to develop a single definite product, but broadens according to areas of consumption and concentrates according to the characteristics of the activity (encompassing from basic research through installation).

According to professional literature, the world's leading aluminum industry enterprises are doing great research, technical development and investment efforts in order that their semifinished and finished aluminum products satisfy material and energy saving requirements which are of increasing importance. This is also the reason why the utilization of alloys is continuing to spread in developed nations.

Aluminum usage will spread primarily to areas where the possibility for the realization of its desirable properties resulting in material and energy savings arises, such as, for example, in the following areas:

--the transfer of electrical and heat energy;
--the transportation industry;
--food packaging.

The chief ways of increasing strength resulting in material savings are as follows:

--increasing the strength of alloys currently used;
--the replacement of currently used alloys with other types which correspond in all other characteristics but are stronger;
--the replacement of unalloyed materials in products with alloys.

Even through the utilization and manufacturing of materials thrifty target alloys and even with resolute measures, we can eliminate our apparent backwardness compared to developed countries only gradually. In all probability, our catching up completely will only occur around the turn of the millenium. Thus, the following increase rate in alloy proportions can realistically be expected:

--in 1980, approximately 26 percent
--in 1985, approximately 35 percent
--in 1990, approximately 45 percent
--in 2000, approximately 60 percent

Keeping in mind our (expected) results in the area of alloy development through the end of the Fifth Five-Year Plan, it is advisable to note the following target alloys during 1981-1985:

--the development and promulgation of medium strength platable and enamelable $AlZn_4Mg$ alloy types, primarily for building industry use;

--the development of very strong AlZnMg (Cu) alloy types for utilization for load bearing (building and vehicular industries);

--target alloys of thin walled, high ductility alloys (food and packaging industries);

--the development of medium strength and very strong alloys workable on automatic machinery, for the machine industry;

--the development of target alloys for utilization by the vehicle industry for various structural parts (body, wheels, cylinder, etc.);

--the development of AlMg and AlMgSi alloys which are more easily molded, primarily through secondary alloys and through the understanding of the effects of impurities;

--the development and institution of layered alloy structures.

With the increase in the proportion of alloy products, and as a result of other measures, the "average strength" of semifinished products will also increase. (We call the average strength of semifinished products the average guaranteed break strength values, weighted according to quantities produced, of certain alloyed and unalloyed products under various conditions.) The degree of increase, taking the expected 1980 value as basis, will foreseeably be as follows:

--1980 100 %
--1985 115
--1990 140
--2000 190

Detailed calculations performed by the steel industry in a comparable case indicate that the quantity of metal which can be saved through dimension reductions made possible as a result of strength increases is not directly proportional to the strength increase, but is less. The amount saved depends, among other things, on the intended use, on the type of load (pulling, pressure, etc), on the fineness of the products' dimension graduations, and on the level from which the strengthening begins (if one begins from a lower strength level, the portion of conservable metal is greater). The amount of metal conservation from strengthening can, on the average, be 30 percent.

Scrap Processing

Within the framework of endeavors to material and energy conservation, particular attention is being turned everywhere to the reprocessing of aluminum scraps.

The explanation for this is that, apart from the period of rapid changes, the quantity of collectible aluminum scrap originating from the processing phase, or rather, from usage, can reach 20-30 percent of the country's annual processed amount. In our case we are talking about approximately 50,000 tons annually, which represents an enormous value.

To place the scraps back into production, it is necessary to resolve chemical, metallurgical, and to a lesser degree metal science tasks related to melting down, cleaning the fluid metal and chiefly determining the composition. First, however, the gigantic task of reorganizing and modernizing the whole of Hungarian aluminum scrap management must be resolved.

For this reason we are not discussing this matter in more detail.

More Completely Processed Semifinished Products

This concept is concerned primarily with the form and outward appearance of semifinished products. Products belonging here, for example, are:

--patterned sheets and ribbons,
--contours folded from ribbons,
--corrugated sheets,
--welded pipes,
--contours ready for installation,
--ribbed sheets and ribbons,
--products with treated surfaces (anodized, painted, etc)

In addition to increasing the income of the Hungarian Aluminum Trust, the goals of increasing their manufacture are to satisfy the consumers' variety requirements, as well as to reduce the total labor investment.

According to the estimate of OMFB [National Technical Development Committee] Aluminum Industry Standing Coordinating Committee, (study 3-7701-T) the volume of products belonging to this sphere, and the proportion represented in semifinished products will foreseeably be the following:

	1000 t	percent
1977	24	17
1985	57	24
1995	85	28

Increasing Productivity

For the manufacturing phase of semifinished and enhanced completion levels of products, an investment of nearly 100 million forints to bring a manufacturing capacity of 1,000 tons annually into being is required. Everything must be done for the purpose of intensification, if only to exploit the instruments as much as possible.

The importance of this task is emphasized by the fact that for two reasons the stronger alloys make larger demands on the capacities of the molding equipment. Because of their greater resistance to molding, they are more difficult to shape, and specifically in the interests of materials conservation it is necessary to produce thinner or smaller diameter products out of them.

One of our greatest tasks is that, despite the expected increase in labor requirements of the products, we shall more than double labor productivity, calculated in tons per person, by the turn of the millenium.

Currently more than 5,000 persons are employed in the manufacturing of aluminum semifinished products. In per capita production, our plants, by the early 1980's will reach the 1975 figure of the corresponding French plants. It is noteworthy that the French product selection, which is more than twice ours, because of alloy proportions, lesser thicknesses and generally better quality, requires considerably more labor than the Hungarian. However, because they have more plants, these can be more highly specialized.

Taking the expected productivity of 1980 into account, there would be a need for approximately 12,000 workers in semifinished product manufacturing in the year 2,000. Around the semifinished product manufacturing factories situation in the otherwise industrially more developed Dunantul region, this number simply cannot be assured. Thus, the starting point for development efforts must be that despite the increase in the labor requirements for variety, the majority of production increases must be resolved without the utilization of extra numbers, through increasing productivity.

From this requirement, as well as from the expected quality improvement effects of regulating processes it follows that in the future particular attention must be focused on the intensification of processes and on computer direction.

9093
CSO: 2500

NUCLEAR ENERGY DEVELOPMENT PLANS OUTLINED

Warsaw RADA NARODOWA GOSPODARKA ADMINISTRACJA in Polish No 22, 3 Nov 79 pp 30-[illegible]

[Article by Zdzislaw Celinski: "Nuclear Energy and Plans for its Development in Poland"]

[Text] Despite much resistance and many obstacles, nuclear energy is developing very rapidly in the world, faster than any other branch of engineering.

The main, although not the only, stimulus for this rapid development of nuclear engineering in the world is, without question, economic. As early as the sixties, nuclear energy was becoming economically competitive with conventional energy and, in 1973, the fuel crisis distinctly tipped the scales in its favor.

According to 1976 data, 1 kWh of electric power produced in the USSR in a conventional power plant cost 0.89 kopecks (Krivoy Rog power plant, coal-fired, 3,000 MW); in a nuclear (Novovoronezh) power plant, the cost was 0.64 kopecks. In the United States, the corresponding figures were 2.4 c/kWh and 1.4 c/kWh; in France, 12 and 7.5 c/kWh; in England, 0.97 and 0.6 p/kWh; in Canada, 1.3 and 1.0 c/kWh; in the FRG (1974), 7.5 and 4.0 f/kWh. The differences are much greater when compared with power plants fired by liquid fuels.

Another stimulus for such a strenuous development of nuclear energy is the awareness of the increasingly more rapid physical exhaustion of the world's energy fuel resources, particularly petroleum and gas, and the urgency to replace them with nuclear energy.

The third stimulus for rapid nuclear energy development is political considerations.

It is not surprising, therefore, that the developed western countries are striving to be less dependent on imported petroleum, especially on imports from the politically unstable regions of the world, by increasing energy production based on their own resources and primarily by increasing nuclear energy's share in energy production. The role played by the distribution of uranium resources in the world is important, for, unlike petroleum, uranium resources are concentrated largely in the highly developed countries (United States, Australia, South Africa, Canada).

Finally, the fourth stimulus for rapid development of nuclear energy are environmental protection considerations. Nuclear power and heating plants today constitute the most environmentally "clean" technology for producing electrical and thermal energy. It is also the safest technology. One need only recall that during the 25-year history of nuclear power engineering there has not been even one fatal reactor accident.

Poland is very late in entering the nuclear power engineering era, not only in relation to the highly developed countries, but also to our neighbors in the CEMA family of nations.

The factors that have forced our country into nuclear energy development are principally a shortage of traditional energy fuels, the need to protect the environment and economic considerations. Economic benefits, however, will be fully apparent only when the country's nuclear energy development reaches a specified level.

Forecasts of the country's fuel-energy balance indicate that in the year 2000, 23,000 MW electric power will have to be supplied by nuclear power plants. The magnitude of the problem can be shown by the following comparison: In 2000 (meaning in just 20 years!), nuclear power plants must produce 134 billion kWh, i.e., more than the production of Poland's entire electric power industry in 1980. The scores of nuclear reactors that will have to be built to achieve this constitute a tremendous task. But the rapid development of nuclear energy is indispensable, and demands the continuing socioeconomic development of our country.

Along with the shortage of conventional energy fuels, the second reason for the essential development of nuclear energy in Poland are environmental protection considerations. The protection of the environment from atmospheric pollution by coal power is a very serious problem in Poland.

Polish Equipment for Nuclear Power Plants

The start-up of one or even several nuclear power plants in a country does not quality it to say that it has entered the nuclear energy age. The ability to develop and produce nuclear power plant equipment is far more important. In a very short time most countries in the world will have nuclear power plants, but only those that are able to produce the equipment for these plants can count themselves as being in the nuclear energy "marketplace". Those are the countries that will gain most from nuclear energy development.

This is now well-understood by our government authorities, for they are intensively developing the nuclear energy industry and even today, many years before start-up of the country's first nuclear power plant, we are producing selected first-stage equipment for export. This gives us a chance at belonging, perhaps in a limited way, to that small group of highly developed countries that are producers of nuclear energy equipment.

The national industry's tasks for development of nuclear energy equipment were definitively formulated and approved by Council of Ministers Resolution No 82, June 8, 1979, "On Start-up and Development of Production of Nuclear Power Plant Equipment". Based on CEMA co-production agreements, it specifies the equipment that is to be produced, sets forth production schedules prescribed by directive, and defines the essential steps that must be taken to develop the nuclear industry, mainly by the Ministry of Heavy and Agricultural Machine Industry and the Ministry of Power Industry and Atomic Energy.

In accordance with the CEMA co-production agreements, Polish industry will produce the following equipment, largely according to Soviet documentation, for its own needs and for export to CEMA countries: pressure stabilizers, heat exchangers, emergency diesel units, fittings, cable leads, "Hindukusz" internal core control systems, "Sejwal" dosimetric control systems, and cars--i.e., containers for hauling burned fuel. This equipment comprises about 15 percent of the outfitting value of a nuclear power unit.

In addition, for nuclear power plants built in Poland, its industry will produce steam generators and machinery facilities with 500-MW turbine units. This will comprise about 25 percent of the outfitting value of a nuclear power unit.

It is expected that substantial sums will be allocated to expand the several industrial plants that will form the nuclear energy industry's material base.

Deliveries have already begun. In December 1978, the Industrial Boiler Factory plants produced the first primary cycle heat exchangers exported to the Soviet Union. This means that some of the necessary specialized technology for nuclear energy equipment production has been introduced and mastered. The equipment that has been produced or is scheduled for production is of the highest technical quality; its labor-intensiveness is high and its material costs are relatively low. The extent of this production ranks our country with the leading producers in this field. It also suggests the possibility of export to countries of the second payment area. At the same time it ensures us a significant share in the development of energy in the CEMA countries and forms the basis for the expansion of the domestic nuclear industry. Both the scope and the amount of production and deliveries make it certain that the Poles will specialize in equipment and apparatus production, fulfilling domestic and export requirements.

First Nuclear Energy in 1985

Forecasts on the development of the electric power industry in Poland envisage a gradual start-up of nuclear power plants beginning in 1984.

Preparations are now underway to begin construction of unit I of the first nuclear power plant in Zarnowiec. In 1980, the construction enterprises will enter the building site. The planned work cycle for the 440-MW unit I is to take 60 months and end in 1984. The second unit, also rated at 440 MW, is to be built immediately following the first, with a 12-month time difference. In both units, type WWER-440 reactors will be installed, equipped with the most modern safety systems and enclosed in safety shields with sprinkler systems and water condensers. In the following stage in the Zarnowiec power plant, a power unit with a WWER-1000 reactor will be started up. The space layout for the power unit is now being prepared and its construction is planned for 1982-1987.

The second Polish nuclear power plant will probably be located at Kujawy. According to preliminary plans, this will be a plant with three WWER-1000 reactors.

By 1990, nuclear power plants generating 4,880 MW will be in operation. The following start-up schedule is forecast: 1984, 1 x 440 MW; 1985, 1 x 440 MW; 1988, 1 x 1,000 MW; 1989, 1 x 1,000 MW; 1990, 2 x 1,000 MW.

In the decade following, the nuclear energy construction rate should increase greatly. Start-up of one 1,000-MW unit each year for the first four years and then two or three units each year thereafter is anticipated.

In the year 2000, total generating capacity in nuclear energy power plants should reach 22,880 MW.

9295
CSO: 2600

POLAND

POWER PLANT DESIGN, CONSTRUCTION DISCUSSED

Directors, Engineer Interviewed

Warsaw RADA NARODOWA GOSPODARKA ADMINISTRACJA in Polish No 22, 3 Nov 79 p 38

[Interview with Zbigniew Pakula, Managing Director, and Andrzej Grabowski, Assistant Director and Chief Engineer, "Energoprojekt", on power plants in Poland, by Teresa Latuszkowa]

[Text] "Energoprojekt", the Office of Power Industry Studies and Design", is an institution that is closely related to the present development of the Polish power industry and cooperates in the formation of its future generating base. Since 1949, i.e., from the time of its organization, it has completed the design of 350 thermal and hydropower plants, public-utility and industrial electric power and heat generating plants, municipal and industrial heating plants, and 3,500 network installations: stations and electric power networks in Poland during the past 30 years. This indicates that "Energoprojekt" participated in the expansion of generating capacity from a postwar 3,000 MW to the present over 24,000 MW; in the construction of over 9,000 km of 110 kV and medium voltage lines and many tens of thousands of electric power stations. "Energoprojekt" now employs 3,100 workers in its main offices in Warsaw and in its offices in Katowice, Gliwice, Poznan and Krakow, preparing design-cost estimate documentation totalling 600 million zlotys annual average, of which 15 percent is for export.

[Question] How did "Energoprojekt" begin its activities?

[Answer] It began with designs for reconstruction of power plants destroyed during the war. The first documentation for such reconstruction was for the Laziska power plant. Then we began to design power plants for construction from the ground up. There were not too many designs, however, in which we could, without great effort, duplicate previous solutions, for each power installation required other solutions, specific to its own problems.

We began with design of solid-fuel plants, initially hard coal. After discovery of brown coal deposits, we began in the fifties to design power plants for brown coal, in order to exploit the discovered deposits. The first such power plant, in Konin, was co-designed with specialists from the GDR, who had a great deal of experience in this field. We have now begun a new stage in our work, associated with the utilization of nuclear energy. In June we completed the technico-economic assumptions of the first Polish nuclear power plant in Zarnowiec. We are co-designing it with the Leningrad section of "Teploelektroproyekt", with whom we have worked for many years. Some years ago we co-designed the Turow power plant.

In improving the process of designing and constructing power plants, we are making more use of standardized equipment and elements, which has reduced investment costs and makes operation easier. Mostly because over 90 percent of design of electric power networks is based on standard elements, but even here standard solutions must be adapted to local conditions.

[Question] How long does it take to design a power plant?

[Answer] From 8 to 10 years, counting from the time of beginning the search for a site for a new power plant to the time of start-up of the last unit, which means a long time before construction begins and during the entire period of construction. The power plant design is created by about 100 engineers representing about 50 specialties. Design outlays comprise about two percent of investment outlays.

[Question] What kind of conditions influence the selection of a power plant site?

[Answer] Polish power plants are combined in one uniform, nationwide power system and operate for this common system. Its requirements stem from power and energy needs in specific regions of the country. In power plant site selection such factors are considered as distance from energy source, conditions for hauling fuel and water, method of leading out the electric power, and the already present environmental pollution. Obviously, brown coal-fired power plants are located near the coal deposits. After obtaining the site recommendation, the difficult, as a rule, process of obtaining site approval begins. This involves expressions of position (and agreement) from local authorities and over 40 offices and institutions responsible for the functioning of the economic-social infrastructure of that locality.

Even more difficult than siting, due to connection and intersection with installations of the settlement's network, is coordination of the run and the layout of the power networks feeding electric power to the cities, villages and industrial plants. Extensions of deadlines are sometimes necessary because local authorities change their position on already negotiated upon and accepted agreements. This delays the design cycle and sometimes also complicates the accomplishment of the planned engineering solutions.

To improve the coordination cycle, in October we organized (jointly with the city planners) a special, nationwide symposium on problems of locating energy investments. This is open to everyone interested, including representatives of local authorities.

We are well aware that present methods of producing power are burdensome. We want them to be as trouble-free as possible. Because we consider the requirements of environmental protection, we insist that electrical precipitators must be used in our power plants.

During the sixties, Polish industry bought a license for such precipitators and today the Elwo plant in Pszczyna and the Elwoz plant in Bielsko-Biala produce precipitators with a dust-extraction efficiency of over 98 percent. We have installed them in many old power plants during modernization. We are also striving to design our power plants so that they will not be a blight on the landscape but will blend nicely into it.

[Question] The test of the quality of the designer's work is power plant operating efficiency, but here, especially recently, certain problems are occurring.

[Answer] The test of engineering progress is the indicator of unit thermal consumption per kWh produced. This indicator, which in 1948 in our country was 800 g/kWh, fell to 360 g/kWh, and is steadily falling, despite the fact that our power plants do not operate, as we know, on the best quality fuels.

The serious problem now facing us is the adaptation of power plant equipment to large masses of poor coal and the removal of huge amounts of waste. We had this problem before, but on a much smaller scale, when for a long time we had to design power plants for coal containing large amounts of ballast, meaning water and ash. In connection with this, "Energoprojekt" calls particular attention to design of such loops as, e.g., delivery and conveyance of coal in the power plant and equipment to remove ash from the plants. We must learn how to construct storage yards and examine experience on the storage of ash.

[Question] What, at this time, do Polish power engineering designers have in the shop?

[Answer] We live in the future. We now have in the shop those installations that will become a reality during 1981-1985. We are developing energy investment concepts for 1986-1990. We are discussing and formulating the shape of the power industry for 1990-2000. But at the same time, in view of the urgency of expanding the Polish power industry to the utmost, we are trying, as efficiently as possible, to prepare documentation for new investments and also, because of deteriorating fuel quality to prepare documentation for modernization and reconstruction of power plants and electric power and heat generating plants now in operation.

We are expanding, on a large scale, studies, research and work on site selection for new power plants and on expansion and modernization of the Polish power system. In the "Energoprojekt" experimental plant in Poznan we have begun the anti-import production of some unique apparatus indispensable to the power industry.

On Construction

Warsaw RADA NARODOWA GOSPODARKA ADMINISTRACJA in Polish No 22, 2 Nov 79 p 39

[Interview with Zbigniew Maj, Assistant Director for Engineering and Development, Association for Power Plant Construction and Industry, on power plant construction, by Teresa Latuszkowa]

> [Text] The only organization in Poland that specializes in the construction of power plants, electric power and heat generating plants, and heating plants and other installations of the trade-union and industrial power industry, is the Association for Power Plant Construction and Industry, which represents a total of 19

enterprises, the majority of them construction-assembly. The association has been active since 1953. It now employs 45,000 people. What are its most important tasks now?

[Answer] Our tasks stem from the needs and development programs of the Polish power industry. It is sufficient to say that the annual value of aggregate production grew from 6 billion zlotys in 1970 to 23 billion zlotys in 1979, of which 6 billion represented export production.

During 1950-1955, the Association delivered 1620 MW for utilization (an average of 270 MW per year); but during 1955-1960, the power delivered totalled 2,355 MW (i.e., an average of 471 MW per year).

The 1976-1980 five-year plan set us a goal of 7,000 MW, an average of 1,400 MW per year. The goals were met by the Association's staff: in 1978, a record 1,470 MW was delivered.

It should be added that up to 1953 we used only imported boilers and turbine units in our power plants. The unit power of this equipment was 20 to 55 MW. During 1955-1970, power units reached 100 MW. We began to use domestically produced turbine units during this period.

-- The first 50 MW Polish turbine unit was installed in the Konin power plant in 1961.
-- The first Polish boiler producing 200 tons of steam per hour was installed in the Skawina power plant in 1961.
-- In 1978, in the Kozienice power plant, the largest (thus far) power unit, 500 MW, comprised of a soviet turbine unit and a Polish boiler, was built.

At present, the staffs of the enterprises in the Association for Power Plant Construction and Industry are working on the Polaniec, Belchatow and Opole power plants, and also electric power and heat generating plants in Kaweczyna, Leg, Gdansk, Gdynia and Lodz.

The degree of complexity increases. Ever more modern and complicated equipment is being used in Polish power plants.

[Question] How long does it take to build a power plant? What is its average cost?

[Answer] Dolna Odra, to stay with the same example, took six years to build (from 1970 to 1976). Investment outlays totalled 10 billion zlotys, of which 5 billion represented the value of construction-assembly jobs, i.e., manpower, materials and equipment. Outlays and proportional costs for construction of the first stage of the Kozienice power plant were the same.

We attach great importance to material savings (steel, concrete, timber) by broadly applying engineering advances and new technology.

And so, e.g., use of reusable, movable, concrete tunnel scaffolding instead of timbering will save, each year, about 360,000 tons of wood. We save reinforced steel by melting down the scrap and reusing it in producing prefabricates. Next year, for example, we plan on saving about 3,000 tons of steel, valued at about 8 million zlotys, in this way.

[Question] Recently, however, investment cycles are becoming much longer. What decides that construction deadlines will be met?

[Answer] The basic condition for constructing and turning over an installation for operation by the scheduled deadline or, under favorable conditions, shortening that cycle, is precise programming of a construction schedule, accurate fixing of the sequence and method of executing specific jobs, and uniform scheduling of the work. The latter, to a large degree, depends on the co-producers, i.e., on on-time delivery of necessary construction materials, machinery and equipment. We have had great difficulty in recent years with scheduled deliveries, which frequently causes logjams and excessive concentration of jobs during certain periods, with the risk that the jobs will not be completed.

To change this situation, some very important government decisions have been made recently, decisions on combining into one arm, i.e., subordinating to the Ministry of Power Industry and Atomic Energy, all participants of the power investment processes and organizers of power plants and electric power and heat generating plant construction, formerly under the Ministry of Construction or Ministry of Heavy Machine Industry. This refers both to our Association and also to equipment suppliers, (boilers, turbine units and other auxiliary equipment), such as the "Megat" association. This will undoubtedly make for better coordination of activities, influence the harmonious development of subbranches connected with power plant construction, and in doing so, will make it possible to obtain better results in expansion of the Polish power industry.

The present situation, the need for rapid and significant expansion of the Polish power industry, places before us, in the field of power plant construction, the goal of delivering, during 1981-1985, over 50 percent more electric power than in the previous five years and during the same period almost doubling results in construction of electric power and heat generating plants.

Therefore, we must increase, from the standpoint of performance, the production capacity of our Association, mainly by furnishing our workplaces with tools and equipment, by improving transport, by expanding engineering facilities, and by improving the qualifications of our personnel. All our past experience will be applied to these new tasks.

[Question] Can the local authorities where the power plant is being built, give the builders some concrete assistance? What kind of assistance do you need most?

[Answer] First of all, before starting construction, we must coordinate many matters with local authorities, beginning with selecting a site for the residential construction that accompanies power plant construction. We must coordinate the extent, i.e., the limit of employment of the local populace on the construction site, the method for transporting the workers to the job, even on how they are to be fed. The settlement of these matters on time and in a satisfactory manner is very important to us. The core of the personnel engaged in building each power plant is made up of our long-term employees, specialists who go from one construction site to another. For those "eternal wanderers" we must create working conditions that are not just tolerable, but good, and even competitive in relation to other enterprises. That is why we first try to build housing for the future personnel of the power plant, in which we organize temporary workers' dormitories; the high-classification specialists are assigned larger quarters in which they can live with their families. We take pains to see that cafeterias, snack bars, shops with food items, and newstands are set up. We organize leisure cultural recreation for the people, for only such conditions, along with material incentives, permit us to recruit workers to construct power plants. Because we have only one Social Service Agency on the Belchatow construction site which operates cafeterias and snack bars, we need the continuing assistance of the local authorities, particularly the Trade Departments and their subordinate enterprises.

9295
CSO: 2600

ILLEGAL POWER CONSUMPTION REPORTED

Warsaw RADA NARODOWA GOSPODARKA ADMINISTRACJA in Polish No 22, 3 Nov 79 p 45

[Article by Krystyna Partyka]

[Text] Matters relating to the lawful and contractual use of power include the serious problem of action to prevent illegal power consumption. Consumption is considered to be illegal when there is no contract with the supplier, when the meter is completely or partially bypassed, or when the meter is damaged by the consumer in such a way as to obtain power illegally.

During the current five-year period, the number of detected cases of illegal power consumption was as follows:

-- in 1976, 6,589, including 182 by industrial consumers
-- in 1977, 5,973, including 142 by industrial consumers
-- in 1978, 5,420, including 114 by industrial consumers

In the first six months of this year, over 2,800 cases of illegal power consumption in the country were confirmed, of which 44 were cases involving industrial consumers. On the basis of official inspection reports, the dishonest consumers were presented with bills totalling over 44 million zlotys.

During the same period last year, over 1,330 cases were detected, bringing in over 20 million zlotys.

Instances of illegal consumption appear in all consumer groups, both in the private and the government cooperative sectors, but most cases are detected among the non-socialized consumers in the household and farm groups.

Detection by consumer service repairmen occurs principally as a result of:

-- information supplied by bill collectors,

-- routine technical inspections at the consuming source,
-- reports to Citizens Militia by outside persons,
-- exchange of meters for recertification.

In 1976, on the basis of a decision by the State Price Commission, No DC-U/80/76 (Official Price Gazette No 11, item 91), new accountability rules were established for illegal power consumption, providing for fixed lump sum charges. The amount of these charges varies according to the type of electrical installation, e.g., single-phase, three-phase, but does not depend on the actual amount of power illegally consumed.

The regulations state that:

-- when power-consuming equipment is connected to a single-phase installation, bypassing a meter, the lump sum charge will be 6,000 zlotys;

-- when power-consuming equipment is connected to a three-phase, low-voltage installation equipped with a rated-current (to 15 A) power meter, completely or partially bypassing the meter, the lump sum charge will be 25,000 zlotys;

-- in addition, a fixed lump sum charge of 1,000 zlotys will be made for inspecting the consuming equipment which led to the detection of the illegally consumed electric power.

The assessment of lump sum charges greatly reduces the labor expended in calculating and billing for illegal power consumption and also reduces the number of consumer protests of excessive charges. It has also eliminated the conflicts with consumers which previously took place during inspection and write-up of facts on the power-consuming equipment in the possession of the consumers.

A special leaflet was prepared for distribution by power plants; it describes the regulations in effect governing the connection of power installations to the electric power network and also the conditions for supply and lawful utilization of electric power.

Also, consumers have been informed of the consequences of illegal power consumption. Examples have been cited, showing amounts of lump sum charges for detected illegal power consumption.

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POWER SUPPLY NOTIFICATION SYSTEM DESCRIBED

Warsaw RADA NARODOWA GOSPODARKA ADMINISTRACJA in Polish No 22, 7 Nov 79 pp 34-36

[Interview with Jerzy Bekker, Director of Operations and Deputy Director, State Power Distribution Control Agency, by Antonina Lezenska, on "How Power is Controlled in Poland"]

[Text] [Question] Every morning and evening we hear a radio bulletin announcing the power supply level. What, exactly, does it mean?

[Answer] Before we go into a detailed explanation of the bulletin, let us be reminded that electric power goes to all consumers (to homes, farms, industrial plants) from a complicated electric power system comprising, from the engineering, production and economic standpoint, an integrated whole.

This is a vast aggregation of power plants, electric power lines, transformer-distribution stations and power-consuming equipment. The aggregation constitutes a common electrical network in which power plants generate electric power and consumers receive it. The important characteristic of this system is the fact that the consumers can consume at a given moment only that amount of electric power as is being generated at that moment, for none of it can be stored.

This means that a continuous balance must be maintained in the electric power system between generated and consumed power, which makes it necessary to equalize its production and its consumption. For many reasons, this is not an easy operation.

In order to deal with all the associated problems, that is, to coordinate the operation of the power plants, which should operate in compliance with consumer requirements, properly conduct power from all domestic and foreign sources to a common network, transmit it from one region of the country to another and then distribute it so that it will reach the consumers without fail and within the specified qualitative parameters--proper control of electric power supply is necessary.

The power supply radio bulletin is one form of this control.

In that part of the bulletin in which reference is made to the level of power supply forecast for a given period of time, the consumers are being notified about the foreseen conditions for balancing power and the possible instructions that may follow. In that part of the bulletin in which the specific power supply level is announced, definite instructions are given which the consumers should follow without fail during the time interval cited in the bulletin. This time interval is fixed earlier.

The bulletin is issued by the State Power Distribution Control Agency, which is under the Ministry of Power Industry and Atomic Energy. It is a central, national organ formed to currently control the operations of the electric power system and forecast operating conditions in a specified future.

In addition to the State Power Distribution Control Agency, the distribution control services are made up of:

-- District (Area) Power Distribution Control Agencies, existing in the power districts: in Warsaw, for the central district; in Radom, for the eastern district; in Katowice, for the southern district; in Wroclaw and Poznan, for the western district; and in Bydgoszcz, for the northern district.

-- Plant power distribution control agencies, which are under the district agencies.

-- Regional power distribution control agencies, under the plant agencies.

This means that during every moment the work of the common power network is being monitored around-the-clock by scores of power controllers, each of whom has his own clearly defined scope of activity.

The lowest level (Regional Power Distribution Control Agency) has contact with consumers supplied from the medium and low-voltage networks, with small individual consumers if they have problems with power supply in the towns and villages, and with smaller production and service plants.

The Plant Power Distribution Control Agencies maintain contact with the larger consumers and conduct operations in the high-voltage network.

The district and state agencies are concerned chiefly with the problems of conducting the main operations, and with the basic equipment of power generation and transmission. Their contact with direct consumers is rather sporadic.

[Question] What is the basis for the actions taken when there are shortages or electric power reserves are lacking?

[Answer] Briefly, actions are based on balancing consumption and generation by:

-- producing electric power maximally proximate to demand, with suitable load on generating equipment under control,
-- intensifying, in warranted cases, power deliveries, based on intermittent overloading of power plant generating equipment, within allowable technical limits,
-- importing electric power from other countries, if feasible,
-- initially decreasing power demand by reducing, within limits allowable to consumers, voltage in the network and electric current frequency, and finally,
-- reducing or cutting off power supply to consumers, when, despite all the above measures, the balance of power could not be equalized.

[Question] What are the rules for reducing or cutting off power supply?

[Answer] The action of the control bodies is based on the actual state of power balance, namely:

-- when balance is equal, consumers can use electric power in accordance with the limits assigned to them by their superiors and power management inspection bodies;
-- when there are power shortages, consumers are required to reduce their consumption;
-- in emergencies where power deficits are large or sudden, and consumption reduction to equalize balance is not sufficient, drastic measures are applied: power supply is cut off.

It should be added that procedures applied at a specified balance state, consist of several phases (we call them "intervals"), described by so-called power supply levels. Hence, when there is a power shortage:

In the first procedure level (covering 5 levels of power supply, from 11 to 15), deficit limitations of power consumption for consumers are instituted. These constitute 12-14 percent of national demand in the actual plans.

The second procedure interval, applied to consumers when the previous action did not bring the anticipated results, involves a severe reduction in power consumption (the next three power supply levels, from 17 to 19). Deficit and severe reductions may involve 50-60 percent of normal peak-period power consumption. It may be that in this interval power consumption in some plants is reduced so much that production cannot be continued and machinery and equipment must be shut off or put on idle run, after safeguarding against damage.

The third procedure interval, emergency shut-down, is applied in cases of particularly high power losses in the power plants and exceptionally high demand for power, generally associated with critical atmospheric conditions.

Together with these three intervals--deficit, severe, and emergency--power supply can be reduced in relation to the value of the peak-period demand, expected every December, from 30 to 45 percent.

[Question] Well, the lower the power supply level given in the bulletin...

[Answer] ...the greater the certainty that there will be no restrictions on power supply in the time interval given in the bulletin, or that they will be relatively small. However, the 14th or 16th power supply level, at which an inhabitant of a city or center will not generally be deprived of electric power for lack of supply, already indicates a definite procedures directive for the industrial consumer. For this consumer, the state of "readiness" for reduction, as a rule, begins at level 16. Supply level 20 forecasts a severe or emergency reduction for many areas (a power outage of several minutes' or several hours' duration).

[Question] To whom are the State Power Distribution Control Agency's bulletins principally directed?

[Answer] To prior-selected consumers, who are mainly large industrial consumers of specified branches of economy, but also to smaller production plants.

We divided these consumers into two groups:

-- so-called radio consumers, for whom the radio bulletin is

the final warning and advisory of possible reductions, and
-- so-called telephone consumers, for whom the radio bulletins are only a warning, and to whom final instructions as to reductions will be transmitted individually by telephone.

In the procedural system used to date, severe and emergency reductions (from supply level 16 and above) have also been announced by telephone communication.

[Question] Does this mean that the control agency's bulletins do not affect the average resident?

[Answer] Practice shows that a large segment of society is interested in the radio bulletins, because people have already associated the content of the bulletins with the power supply conditions occurring that day. And so the radio bulletins call the attention of all the people to the need to conserve power and inspire, I believe, that conservation.

[Question] How is the power supply reduction plan determined?

[Answer] The aggregate value of power reduction and cut-offs in the specific intervals (deficit, severe and emergency) is arrived at by the Ministry of Power Industry and Atomic Energy on the basis of a proposal by the SPDCA. These values are coordinated with the Main Inspectorate of Power Management and approved by the Government Presidium. In the deficit and severe intervals, they are divided among 10 basic economic ministries (construction, mining, metallurgy, forestry and timber industry, chemical industry, light industry, machine engineering, heavy and agricultural machine industry, food industry and purchases, and power).

The ministers of these ministries divide these aggregate values of reduction among the individual associations and among the plants.

The basis for fixing the amounts of the reductions is the previously mentioned power consumption limit assigned to each plant by the Inspectorate of Power Management for a specified time of day. Having received the reduction order, it must reduce its consumption by the specified value of megawatts from that "base". If, at the time of receiving the order the consumer was not using the full limit, he can reduce it by a correspondingly lower value.

Once a year, at the turn of September-October, the selected industrial consumers are informed by their supplier (a power plant) to which reduction group they were assigned and at which supply level they are required to reduce their power consumption (and by how much).

Power Consumption Regulations - Power Supply Levels

Supply Level	Balance State	Amount of Power Consumption	Consumer Action
03	Equal	As in fixed limit or designated power	No restriction anticipated
10	Power shortage	As in fixed limit or designated power with probability of restriction	Preparation for possible restriction
11		Same as level 10, reduced by amount fixed in first group from continuous (shortage) restriction plan	Restrictions in power consumption
12		Same as level 10, reduced by amount fixed in two groups from continuous (shortage) restriction plan	"
13		Same as level 10, reduced by amount fixed in three groups from continuous (shortage) restriction plan	"
14		Same as level 10, reduced by amount fixed in four groups from continuous (shortage) restriction plan	"
15		Same as level 10, reduced by total restrictions fixed in five continuous and shortage groups	"
16	Threat of unreliability	Same as level 15 with probability of severe restriction	Restriction and preparation for severe
17		Same as level 15, reduced by amount fixed in first group of severe restrictions	Severe restriction
18		Same as level 15, reduced by amount fixed in two restriction groups	"
19		Same as level 15, reduced by total amount fixed in severe restrictions plan	"
20	Threat of failure	Same as level 19, with probability of power interruption	Preparation for power outage

Note: In accordance with Council of Ministers Resolution No 155/79 dated September 21, 1979, on establishing measures ensuring reduction of power shortages.

On the basis of these notifications, the industrial consumer power services are required to listen regularly to the daily bulletin of the SPDCA, which is broadcast three times each working day (at 0800, 1300 and 2100) on Program I of the Polish radio, and twice on Sundays and holidays (0800 and 2100).

[Question] Which industries and establishments are the first to be affected by the restrictions on electric power consumption?

[Answer] Those which, on one hand, use the most power and, on the other hand, are least affected by the restrictions from the standpoint of losses in production, wear on equipment, etc., as a result of these restrictions. The greatest burden of restrictions is borne by the power-intensive branches, such as metallurgy and the chemical industry. Light industry, however, is affected to a much lesser degree. The food industry, generally, is exempted from restrictions.

When it is necessary to institute shutdowns (which is done by the Regional Power Distribution Control Agencies on orders from above), the consumers in rural areas and small towns are the first to be affected. When further shutdowns are necessary, they are made in the larger towns and sometimes even in the heavily populated centers.

[Question] Is it possible that even in the early stages of shutdown, such sensitive consumers as hospitals, animal farms, greenhouses, cold-storage plants, etc., will be cut off from the network?

[Answer] Shutdown plans, obviously, are prepared after careful consideration and the lines to which these very sensitive consumers are connected are placed at the furthermost levels of the shutdown plan, or are not included at all. But in emergency situations, which, of course, can never be excluded, when shutdowns are more severe, encompassing entire specified areas of rural communes or provinces, such cases may occur.

Therefore, these particularly sensitive consumers who cannot switch to another power supply from the common network, in order to avoid threat to human lives or very serious damage to animal farms or to technology, most definitely should be equipped with emergency power supply units. Unfortunately, many ministries and the plants under them, although this is not a new problem, ceased to regard this as important during the period of adequate power supply. In many instances, units, although they were so badly needed last winter, are still inoperative and lack the necessary servicing and fuel.

We appeal to their owners to restore this equipment to a condition of full serviceability as quickly as possible. Those who do not have such units and who are likely to be at risk in case of loss of power, should obtain them as soon as possible.

[Question] Are there any priorities in control of power for provinces?

[Answer] There are no area priorities for provinces, because SPDCA is guided by the principle of uniform distribution of power to the entire country. It is understandable that those provinces which must by reason of their own specificity use the most power, must participate to a larger degree in conservation and in power supply restrictions. But there are, as previously mentioned, priorities for industries and sections of the economy that are particularly important, or for industries and consumers with technological processes that are especially sensitive to power restrictions, and so also, for provinces in which these consumers are located.

[Question] What conclusions can the province and rural commune leaders draw from the SPDCA daily bulletins for their own ongoing activities?

[Answer] The same conclusions as the production plant directors, although for enterprises of a different type and on a much wider scale. Province and commune leaders, as local managers, are very keenly interested in the amount of electric power supplied to satisfy their power demands in the local area and the consequences of power shortages. Bulletins announcing a high power supply level, signalling a difficult situation in the power industry, are particularly important for local administrative bodies because they give information on a planned or forecast interruption of power to consumers in selected areas of the province or commune, and thus give them an opportunity to take appropriate action to reduce possible losses.

[Question] How are the instructions and orders contained in the SPDCA bulletins executed?

[Answer] Initially, i.e., in the fall of last year when we began to implement the present system, bulletin instructions were followed with strict discipline. The SPDCA radio and telephone advisories were very effective. But with time, and especially during the past summer months, a considerable drop in the effectiveness of our instructions was observed. This is very damaging for it is accompanied by a threat to the continuity of power system operation. The consequence of ignoring an order to decrease consumption may be an emergency that is far more severe than a restriction, with effects that are more difficult to correct.

[Question] With what kind of forecasts and activity plans is the SPDCA approaching the forthcoming peak period?

[Answer] The forecasts are not very favorable, because the need to reduce power consumption continues to exist.

Our plan of action, prepared for the fall-winter 1979-1980 peak period, contains a potential for reducing maximum consumption by appropriate action of control bodies, by 40 percent.

First, however, the previously mentioned intensification of power supply and control (reduction) of peak-period power demand in the 600-800 MW range will be implemented.

Second, an amended system of peak-period power consumption restrictions by industrial and other large consumers, encompassing--on an eight-step table--power over 3,000 MW, will be implemented. This system assumes minimization of production losses by frequent rotation of consumer groups and by informing them well in advance, by means of mass media, of planned restrictions in electric power deliveries. Also, individual consumers, where possible, will be given advanced warning of an impending power interruption by several "blinkings" of the lights.

We also foresee improvement and enhancement in inspection of consumer observance of fixed power limits. To achieve this, installation of automatic control systems will be continued, ensuring a continuous check of power utilization by large consumers. Random checks of power consumption will also be increased, in accordance with the decision of the Minister of Power Industry and Atomic Energy and the Main Inspectorate of Power Management.

An essential condition for the effective operation of the amended system, however, is complete consumer discipline in total application of reductions ordered by the energy control bodies, both from the standpoint of their specified amount as well as duration. If the radio and telephone bulletins were observed with iron discipline by everyone to whom they are directed, reductions in power supplies for the more sensitive consumers, particularly for the people, would be less frequent and of shorter duration.

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NEEDED CHANGES IN ECONOMIC OPERATING SYSTEM DISCUSSED

Warsaw ZYCIE GOSPODARCZE in Polish No 1, 6 Jan 80 p 4

[Unsigned article: "Thursday Congress of the Polish Economic Association: The Operating System of the Economy"]

[Text] The fifth successive Thursday meeting of economists was devoted to the operating system of the economy.

The main idea of this exchange of views was the assertion that in a period oriented towards quality it is both desirable and possible to enter upon the path of quite intensive system changes. A necessary condition is that these changes be approached in a comprehensive manner, or that the restructuring of the economic-financial mechanism occur together with a strengthening of central planning (. Mujzel). A failure to link these two directions [of reform] might give rise to counter-efficiency phenomena (W. Wilczynski).

The solutions brought forth up to now were characterized by an insufficient stress on the part of the economic profession on the cohesiveness of individual changes (B. Glinski) as well as on the transformation of general concepts into operational solutions (Z. Madej). The economists approached changes in the operating system in a manner which was too one-sided, stressing only the economic side and bypassing other aspects of these processes. In consequence only economists, and sometimes jurists, were drawn into the work on these transformations, to the neglect of collaboration with sociologists, political scientists, and so on (B. Glinski). Nor were such fundamental questions settled as whether the economy should be a single large multi-plant enterprise or rather a centrally guided system composed of separate economic organisms (W. Wilczynski). The acceptance of one of these structures is a fundamental matter, for it furthers a clear definition of jurisdictions and responsibilities (K. Kucharski).

The operating system in force at the moment acts to an unsatisfactory degree to tighten the linkages between the results of work and the rewards for it (Z. Fedorowicz). The directives guiding the economic organizations have a short-time horizon (annual plans) and therefore induce with insufficient strength to the undertaking of the more difficult efficiency-raising operations with a longer implementation period.

The duplication of instruments influencing the same field of economic activity is a not infrequent feature of the operating system, and at times the effects of these instruments run in different directions. For instance, export tasks are expressed in foreign-exchange prices and tasks for the production of export goods in [domestic] sales prices. The maximization of the latter causes a worsening of the competitiveness of export offerings and a decline in the possibility of implementing export tasks (U. Plowiec). The application of indicators specifying the division of output by directions of final use and the implementation of policy preferences for some of these directions at times exert an unfavorable influence on [inter-enterprise] cooperation and supply links and on efficiency.

The basic direction of the changes should be an orientation towards the solutions accepted in the framework of the WOG [large economic organizations] system, with an ultimate perspective of such changes as were achieved in Hungary (B. Glinski). Also among the possibilities is an approach along the path which, for instance, was initiated in the USSR.

An indispensable condition is, above all, to exert an effect on the price and wage system which would lead to a return to economic equilibrium. Without a restoration of order in this sphere management is an extraordinarily complicated task (B. Glinski). More careful attention in the solutions must also be paid to cost accounting (K. Kucharski).

A further necessity is a demarcation of jurisdictions. This must be a social contract which all accept--a contract framed in the form of a legal act of the highest standing (many discussants).

The changes can take place by stages, but under condition of an awareness of the ultimate solutions and the arrangement of these stages "along a line" which is in keeping with the "line" of the ultimate solutions (J. Mujzel).

The general solutions proposed should be backed to a significantly larger degree than has been the case hitherto by solutions of an operational character. It no longer suffices to conduct meetings and conferences for this purpose. What is necessary are project-planning offices of a kind for the operating system of the economy and its individual elements (e.g., prices, taxes, etc.); these should be offices engaged specifically in the preparation of operational solutions for the general concepts (Z. Madej).

It is necessary to search for such organizational forms--also in the framework of the Polish Economic Association--which would make possible collaboration with representatives of various scientific disciplines in the preparation and formulation of concepts for changes in the operating system of the economy. This concerns in particular the system of motivations. What is at issue is that it should be understandable and convincing not only for the management personnel, but also for the entire workforce.

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POLAND

ECONOMIC PROBLEMS OF MARITIME TOURISM

Gdansk TECHNIKA I GOSPODARKA MORSKA in Polish No 11, Nov 79 pp 685-686

[Article by Dr Andrzej Tubielewicz, secretary of the Conference Scientific: "The Conference of the PTE [Polish Economic Society] on the Economic Problems of Maritime Tourism"]

[Text] The Coordination Council of the Circles of the Polish Economic Society of the Port and Navigation Enterprises organized a scientific conference on the economic problems of maritime tourism on 29 June 1979 aboard the excursion ship "Mazowsze" of the Gdansk Steamship Company. Representatives of shipowners interested in the development of ocean travel, representatives of travel bureaus, scientists, and representatives of the Ministry of Foreign Trade and Maritime Economy, representatives of the Planning Commission of the Council of Ministers, and representatives of the Voivodship authorities participated in the conference.

The task of the conference was to discuss the concept of developing ocean travel from the point of view of social demand, technical and operational developments of ships, economic effectiveness, port management and the organization of services for tourists in port.

During the conference, which was opened by Prof. Witold Andruszkiewicz, president of the Voivodship Board of the PTE in Gdansk, six papers were given on the subject of excursion shipping, ocean liner-shipping, ferry shipping, coastal shipping and their support bases.

Dr Andrzej Tubielewicz of the Gdansk Steamship Company discussed problems of world passenger shipping in a paper titled "Contemporary Trends in the Development of Excursion Shipping" in which, given the disappearance of transport lines, service for the growing quantity of tourist traffic plays the dominating role. The growth in the standard of living of the residents of developed countries along with the worsening of their natural living environment, the drive of people to see new, attractive places, the need for a change in living and working conditions and rest in an atmosphere with high, natural values, not damaged by the processes of industrialization and urbanization, are causing people to turn ever more strongly to the sea.

This does not mean, however, that it is not necessary to seek passengers for excursion trips. The competitiveness of other forms of relaxation, the high costs of operating ships--especially capital and fuel costs--make high activity and elasticity in the area of organization of ocean excursions essential. This also applies to cooperation between tourist bureaus and shipping firms, to make the programs of the excursions more attractive, to adapt sales to the varied demands of passengers. The propositions for excursions on Soviet ships are an example of such offers, including air-ocean, ocean-river, or regular ocean excursions as well. These ships sail practically all the seas and oceans, landing in ports attractive to tourists. The experience of foreign shipowners shows that, despite the growth of construction and operational costs of passenger ships, ocean travel is profitable, especially since new ships are designed to achieve maximum savings in operational costs, but retaining a high standard of service.

Jerzy Drzemczewski from the Polish Steamship Lines discussed the advisability of the conception and construction of a passenger-excursion ship, to succeed the "Stefan Batory." According to the plans, this ship should enter service during the first half of the 1980's. The specific character of the Atlantic passenger market served by thePolish ship (a significant part of the passengers are recruited from American Polonia and Polish citizens), given the stability of the demand for passenger transportation on North Atlantic lines, indicates that the demand for ocean excursions on Polish ships will be at least on the level of the present number of passengers of the "Stefan Batory" in the 1980's. The evaluation of demand carried out during these years on foreign and domestic markets indicates that the size of the demand for excursion trips through Polish travel bureaus will fully guarantee the employment of more than one passenger ship. The analysis of using excursion ships carried out by the Maritime Institute in Gdansk showed that the ocean excursions currently offered amount to 10 percent of the potential demand for this form of tourism. The guidelines of the new passenger ship developed by the Polish Steamship Company forsee a ship of approximately 17,000 BRT [Brutto Registered Tonnage] with a cruising speed of 17.5 knots (maximum speed above 20 knots), and having 750 passenger berths on liner trips and 600 on excursion trips.

Czeslaw Stodolski (engineer) from the Gdansk Steamship Company in a paper entitled "The Concept of an Excursion Ship and Its Operation" presented an initial project developed at the request of the Gdansk Steamship Company by the Design-Construction Office of the Szczecin Shipyard for an excursion ship intended for operation during the summer season in the Baltic and North Seas during the winter in the Mediterranean and West Africa area. This ship with a size of 11,000 BRT and a speed of 17.5 knots would accommodate 600 passengers in 250 cabins for two to three persons. It is anticipated that the passengers would have at their disposal comfortable and spacious recreation, dining and commercial areas and large sun decks. The crew of the ship would consist of 148 persons. The new excursion ship would not only replace the worthy, small excursion ship "Mazowsze," but it would also create proper conditions in Poland for the development of maritime tourism.

Zygmunt Ziminski of the Polish Baltic Steamship Company in a paper titled "Ferry Shipping in the Development of Ocean Travel: presented the intentions of the PZB [Polish Baltic Steamship Co.] in the field of developing ferry shipping and the organization of comprehensive service for passengers coming to Poland on ferries. Presently, the ferry fleet of the PZB consists of eight ferries sailing on lines connecting Swinoujscie with Ystad, Copenhagen, Felixstone, and Gdansk with Nynasham and Helsinki. Polich ferry shipping displays a high rate of development. In 1968-78 passenger transport grew five times. New ferry lines were opened, new, comfortable ferries of Polish construction have been entering service. The continuation of these trends in the 1980's is also anticipated. PZB plans to open additional lines and to purchase more ferries, to expand the ferry bays, in Swinoujscie and Gdansk, construct new bays in the port of Gdynia, and in the future at Kolobrzeg. To carry out the slogan "Work on land, rest at sea," PZB is organizing round trips to the Scandinavian countries, with layovers of several hours in ports, car-ferry excursions, trips of several hours at sea, etc. The improvement of service for ferry tourists on land occupies an important place in the activities of the PZB. In foreign ports at which our ferries call and in the large agglomerates in Poland, representatives and offices of PZB operate, who have the task of serving tourists as comprehensively as possible. A construction program for hotels and eating establishments has been developed in the coastal tourist region.

Wladyslaw Krasnicki from the Szczecin Steamship Company presented a paper entitled "The Development of Coastal and Border Shipping in the Szczecin Region." He discussed the problems of coastal passenger shipping and especially the operation of ships carrying 350 passengers of the SZ type and "Comet"-type hydrofoils, carrying about 120 passengers. These ships sail in Szczecin Bay, and the Kolobrzeg area. The hydrofoils also have connections with GDR ports. On the basis of tourist traffic study in the Szczecin region and plans for the tourist arrangements of this area to 1990 and the need for general shipping services connected with this, the Szczecin Steamship Company worked out a concept for a new passenger coastal ship with a displacement of 1240 tons, a speed of 14 knots, and accommodations for 500 passengers and a crew of 25 persons. The ship will be adapted for making daily excursions in the coastal waters of the Baltic.

Barbara Szwankowska (architect-engineer) of the Maritime Institute in Gdansk in a paper entitled "The Maritime-Tourism Base on the Polish Coast" discussed the basic conditions, which the port management must meet for the needs of the coastal-water and ocean passenger traffic. International ocean travel tends toward the large ports lying in strongly urbanized centers (Gdansk, Gdynia, Szczecin). Gdynia is the largest passenger port of the Polish coast, having the proper support base in the form of two service areas for passenger ships, (French and Pomorskie Wharfs) around which is concentrated services for excursion and Atlantic passenger-line ships. The ferry terminals are located in Gdansk and Swinoujscie; border shipping is concentrated in Szczecin. The growth of passenger traffic will require the expansion of the installations passengers service in the ports of Gdansk, Gdynia, and Swinoujscie; the construction of new ferry terminals and passenger docks in Gdynia, Swinoujscie and, in the future, in Kolobrzeg. It is anticipated that by 1990 coastal shipping vessels will call at 45 ports along our coast. The majority of these ports demand fundamental renovation as well as the construction of new wharves for servicing passenger traffic.

All of the speakers emphasized the need for the development of excursion shipping in Poland and for the creation of the appropriate bases in the form of the passenger-ship construction in Polish shipyards and the expansion of passenger landings and stations in port cities. Besides this, Dr E. Perycz (engineer) of the Ministry of Foreign Trade and Maritime Economy drew attention to the problem of ocean excursions costs and the need to find an answer to the question: Should this be mass or elite tourism? Poland is becoming a maritime country, E. Perycz stated, and in connection with this we should create conditions which would permit the greatest possible number of people to make use of this attractive form of relaxation. The concept presented for the development of excursion shipping will not ensure the realization of this postulate.

Stanislaw Pawlowski, director of the Gdansk-Gdynia Port Authority spoke about the possibilities of soliciting tourists not only from Poland, but also from Czechoslovakia and Hungary as well about the prospects for building excursion ships in Polish shipyards. The Gdansk-Gdynia Port Authority actively supports the initiative of the Gdansk Steamship Company to construct a successor to the "Mazowsze."

B. Szermer (architect-engineer) of the Maritime Administration in Gdynia spoke about the problems of arranging the ports for the needs of passenger traffic, especially coastal traffic. Together with the development of this traffic, the need to modernize and expand passenger landings at Hel and in Jastarnia, Gdansk and Krynica Morska arises. This need will also result from the new parameters of coastal ships, among them catamarans.

Z. Anusiewicz (engineer) of the Design-Construction Office of the Szczecin Shipyard presented the development of the shipyard's specialization in the area of passenger-ship construction. This shipyard is building, among others, a series of "Pomerania"-type ferries for the PZB and "George Ots"-type for Soviet shippers as well as working on designs for passenger liners of around 20,000 BRT, 16,000 hp, and 600 passenger berths and for excursion ships with 11,000 BRT, 7,900 hp, and 600 passenger berths and a coastal ship with 3,000 BRT and 2,800 hp. The shipyard is prepared to construct these types of ships; it is waiting only for concrete commissions from shipowners.

J. Myslicki of the Gdansk Steamship Company referred to the coastal shipping of the prewar years and the first postwar years which the Gdansk Steamship Company is presently upholding. He drew attention to the unfortunate design of the coastal passenger ships which were constructed at the beginning of the 1960's, while also stating that in catamarans presently under construction these types of mistakes are not being made.

J. Zalewski of the Higher School of Physical Education in Gdansk took up the social problems of ocean travel in his comments, saying that the Institute of Tourism and Recreation of the Higher School of Physical Education in Gdansk together with the Polish Economic Society is organizing a scientific conference on coastal recreation trends including sociological and economic aspects from the point of view of social demand.

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STANE DOLANC INTERVIEWED ON ECONOMIC SITUATION

Ljubljana DELO in Slovenian 29 Dec 79 pp 18-19

[Interview of Stane Dolanc, member of the Presidium of the Central Committee of the LCY by Jak Koprivc, Andrej Novak, and Vlado Slamberger: "More Self-Management, but Also More Work, Responsibility and Economizing, for Socialism Is Not a Social Event"; date and place not given]

[Text] Dolanc: All members of Yugoslav society, all members of the socialist self-management society must clearly, openly and decisively declare, that there is a great deal yet to do, that some things will have to be sacrificed, for our people still do not recognize sufficiently the fateful moment in which we are living. Until we realize that each and every one of us is responsible for tomorrow's development, for the future, until that happens, we will have economic and other problems. It depends on us ourselves, how 1980 and 2000 will be. I am an optimist, I always have been and will be, for I believe in our people, in their responsibility, creativity and intelligence.

And there is something else that confirms that conviction for me: So far we have come out of every crisis situation stronger than before. The present situation is such that we must mobilize every person with full seriousness and responsibility, along with all self-management subjects and all sociopolitical functionaries, to work for organized, continuous, and responsible efforts. This new year must be the year of the struggle for stabilization, as President Tito stressed a few days ago.

DELO: In this manner Stane Dolanc, member of the Presidium of the Central Committee of the LCY, addressed us in a New Year's interview for DELO. The DELO reporters involved in the interview were Jak Koprivc, Andrej Novak, and Vlado Slamberger, who prepared the text for publication.

DELO: Some consider that the present economic situation is the result of faulty decisions and excessive postponements of action, so that it will be necessary to reach appropriate decisions soon.

Dolanc: There are various opinions as to why we have arrived at the present economic situation, some of which are very contradictory, but they are not found among us in the LCY. I think that we in the League of Communists are unified.

DELO: In the LCY there is another problem, that in the leadership you are very unified in your evaluation of the present situation. It might even be said, that you are too unified, for in practice there are nearly abnormal tendencies to be seen, where events at times vary and change. At times people say that that famed unity shows too little change.

No One Can Any Longer Count on Getting Support During a Possible Frontal Attack on Self-Management

Dolanc: If things are stated in that way we could easily be declared dogmatists. I think that there is no problem there as you have attempted to spell it out. Certainly it is not true and does not hold, that self-management is the cause for placing the economy in the position where it is now. That is the way it is evaluated, although more often this is in certain circles abroad, while here at home such assessments come from those groups and individuals who essentially have always been opposed to the self-management concept, whether they be on the so-called "left" or on the "right." We have overcome the assessments and the opinions that declared self-management to be an experiment and that with the self-management system it was not possible to achieve economic development and progress. What we have achieved is proof that those opinions are not true.

DELO: Self-management is a component part of the mentality of the Yugoslav working people. No one can any longer count on getting support for a possible frontal attack on self-management.

Dolanc: Yes, no one would get that. It is true, that we have achieved the greatest dynamics in economic growth in the process of the development of self-management socialist relationships. We also dare not forget that other assessment which states that everything that happens here is a reflection of the difficult economic situation in the world....

DELO: ...and in that manner they try to minimize our own responsibility....

Dolanc: ...and yet it is without a doubt that that attitude is one of the causes of the difficulty that we have in the economy.

DELO: Do you agree that we have frequently so exaggerated the influence of foreign trends that in essence we have avoided our own responsibilities?

Dolanc: I do not believe that that is true. We have never so multiplied our difficulties that we avoided our own responsibility. We have recognized that well! It is essential that in Yugoslavia, as it is, we have not been quick enough to eliminate the contradictions that are spawned by the pluralism of socialist self-management interests. Another point that I must stress is that here there is no question of socialism, yes or no, but rather a question of how much socialism and what kind. That in turn depends on all of us. In addition to the problems which are caused by the contradictions of socialist self-management interests, the matter of labor productivity in Yugoslav society is one of the chief factors which hampers more rapid development and which has put us into our present position. Labor productivity here in most economic areas is below the European average.

DELO: ...and yet we fight for it in speeches and in resolutions.

Dolanc: It is not true that we fight for that alone. I will speak openly about the problems as I see them in the situation which has been made worse by the foreign trade deficit, which has increased our foreign indebtedness. What should be done?

Relationships Between the Developed and the Undeveloped Do Not Recognize Republic Borders Alone

[Dolanc continues] Truly, the first thing that fills me with optimism is that in our political leadership, and not only in it, in the whole political structure, we are much more unified, and that at the present moment we must more quickly and more responsibly seek resolutions that will overcome the contradictions that are an expression of the pluralism of socialist self-management interests. Among them, one of the problems is precisely the relationship between the developed and undeveloped parts of the country. We cannot seek to resolve that problem only with republic and province boundaries, for it is much broader, and involves factors that are also to be found within individual republics and provinces. We dare not forget the results of the earthquake in Montenegro. The damage is such that we must, for a period of time, and we have not yet determined the length of that period, give about half of the total that Yugoslavia gives to the less developed to aid that area. That is a great burden on the economy. We will have to reach agreement on the period of time in which we will be capable of eliminating the consequences of the earthquake in Montenegro. There is no doubt that we should create that solidarity.

DELO: You have stressed the reflection of Yugoslavia as it is, and spoken about republic borders and the differences within republics. It seems to us, however, that in Slovenia frequently we are insufficiently aware of the fact that in Yugoslavia there is also a Kosovo, and the reverse. Yet do the negotiations between republics not conceal within themselves some contradictions and dangers of republic egoism and partisan discipline in the republic camps? Would it not be better if a single entity were created in Yugoslavia, not only in the economic sphere but also in the political one? Quite often in discussions we close ourselves within the republic political camp or republic borders, within the federal political entity.

Dolanc: I do not understand what is meant by the republic political camp and the federal political entity.

DELO: We are thinking of the unified Yugoslav political realm.

Harmony Cannot Be Regarded as the Idea That We Are All Alike, and That All Will Wait for the Less Developed

Dolanc: There is a unified Yugoslav political entity and it is open. If that were not so we would not be able to discuss matters as we are discussing them now, openly and including all the problems. It is true that everyone who lives in that Yugoslavia must take into account the interests of Slovenia, as well as those of Kosovo, Macedonia, Serbia, etc., and of course vice versa, in equal measures with equal responsibilities and with equal obligations. No one in Slovenia, nor anywhere else, can raise the question of yes or no when solidarity is concerned. We have always answered and must always answer that, yes. Of course, there is no sense in trying to avoid various questions such as how long, how much, for what, and for what purposes. Yet in the center of importance we must always keep the common interest, the true harmonious development of Yugoslavia as a whole. Here I do not imagine, and I think that no other serious politician would, that harmony is to be found in everyone being alike, and that all will wait until Kosovo has progressed to a point where we can all again start to move forward together. On the contrary, harmony should be found in the dynamics of development, harmony in the sense that the whole of solidarity and aid to the less developed regions will not and should not and dare not hinder development of the developed parts of Yugoslavia. If that were to happen, the whole weight of such solidarity would turn primarily against the undeveloped areas and against Yugoslavia as a whole, so that we would begin to lag even further behind the rest of the world, and our ability to compete in world markets would fall greatly.

Uneconomic Substitution of Imports Is Neither Economically or Politically Justified

DELO: Among the concrete questions about which we have spoken, there is the matter of decreasing the foreign trade deficit.

Dolanc: We must decrease and will decrease imports, if necessary by administrative decisions which are already in force. I see no tragedy in that. We also encounter certain other concepts. Some assert that every substitution is economically and politically justified. I do not believe that is true. An uneconomic substitution of imports cannot be either economically or politically justified, although some expound such a theory. In limiting imports, we must have a comprehensive and concrete, selective approach. At the same time, we must support exports, but again where they are justified economically and politically, and not at any cost. I know drastic examples when we have stimulated exports in that manner and have had to pay for losses in domestic markets that cropped up in individual economic organizations in the exporting process. Although I am not declaring that there will be no more such examples, there should be far fewer of them than previously. Another factor that will help us in stabilization is that we will reduce foreign indebtedness. The interest on credits is enormous and much of our financial accumulations go to pay it. It should also be remembered that the degree to which we reduce credits will mean that we will have to reduce certain investments in Yugoslavia.

DELO: And that is very difficult.

Dolanc: Yes, that is very difficult and also has readily discerned consequences.

Limitation on Personal Income Is a Two-Edged Sword

DELO: That is what we were thinking about when we said that we are at the same time unified in principles, but that unity is not so apparent in practice.

Dolanc: We must increase labor productivity, but that we will be able to achieve only when the worker is truly interested in seeing that with his work, at his work place, he is attaining the highest possible income. I think that there are not yet enough such incentives. I think that the limitation of personal income is a two-edged sword. Every shortcoming in that area will cause even less interest in good work, in income for the working place. I recently spoke about that in Trebnje....

DELO: ...when you said, that poor work is not normal.

Our High Standard of Living Is a True Economic Miracle

Dolanc: I would repeat that today, and not only that. There are also problems of absences from work and use of working time. Let us be honest and reveal the problems in use of working time. Unfortunately, there are no precise statistics about it. Estimates indicate that by absences from work we lose about 6 percent, but personally I think that the number is much higher. Another study indicates that use of working time in Yugoslavia amounts to about 70 percent, but I think that it is even lower. If we add to that the underutilization of economic capacity, then we could easily reach the conclusion--perhaps this will sound somewhat coarse--that with that sort of labor productivity, that relationship to work, the high standard of living that we have indicates that the real economic miracle is here in Yugoslavia and not in the FRG.

DELO: When we speak of economic difficulties, at the same time we direct our attention to the future, since we think that despite all the difficulties we should lose our perspective. It is, however, our fear that some, instead of seeking a forward direction and enduring the things that are a constant with us, hurry back to the past, to recollections, to outmoded methods. Or else they behave as if everything began and will end today. Recently you told foreign newspapermen that you are an optimist as far as the future, and particularly Yugoslavia's future, is concerned. Often you have also warned that it should not be forgotten that our dynamic growth, particularly in the field of economics, has its uncertainties, for the future will be left the bills for an insufficiently thought-our present.

Dolanc: It is very hard to say what will happen in the world in the future, but it is easier for me to talk about how I see the present and future in Yugoslavia. You say that some people turn back to the past. Yet if the past can represent experience and direction for the future, that is not bad. Perhaps it is even true that we must often turn back to the past.

DELO: Does it not seem to you that in Yugoslavia in general we are too little aware of ourselves, so that we must draw from the past for the present, with which at the same time we are building the future?

A Constant in Party History Has Been To Draw Strength, Breadth and Perspective From the Temper of the Working People

Dolanc: Certainly. History shows us the continuing line of the party for the past 45 years. If we look at Slovenia from the time when Edvard Kardelj began to have a decisive influence on policy formation, or if we look at Yugoslavia as a whole from the time when Tito began to have a decisive influence on the policies of the Communist Party, it is notable that even then the party realized that it must draw its strength, its breadth, and if you want its perspective from the temper of the working class, the working people. Today when we speak of the working people, we think of the broad front of those who are building socialism. It is significant that the party sensed that even then. If the Communist Party had not counted on the working people even then, that is, in the old Yugoslavia, it never would have been able to follow its line with the breadth with which it did proceed. It never would have been able to draw its policy from the masses, not been able to come close to them. The category of the working people, about which so much discussion is being carried on by sociologists, political scientists and others, is an extremely important constant factor in the implementation of the policy which from the Communist Party of Yugoslavia formed the avantgarde in the classical sense of that word, which was able in 1941 to open the prospects of the national and social liberation of Yugoslavia for all its peoples and nationalities, and for all its working people.

At the same time we have to return to the past because our self-management system originated in that line. As quickly as the party opened up and directed itself toward the masses of the working people, it had to take into account that if the revolution were victorious, it would have to take into the new socioeconomic system the interests of all the people, and in creating its policies and strategies, it would have to respect the interests of all the working people, not just the communists. The first forms of self-management appeared as early as the national liberation war. As early as 1945 we had workers control. The law on nationalization only supplemented action taken during the revolution, when more than half of the productive means were for practical purposes nationalized by confiscation and sequestering. It is true that we also had the forms of administrative socialism, although one would hope to be able to say that this was as a result of objective reasons. At the time when the homeland was in ruins, we had to use all means, including administrative ones, to join together all political and economic forces to build the foundation, the base for the new era. If you look at the political line at that time, particularly in Slovenia where the Liberation Front was especially strong, broad and open, and thus a powerful political factor, if you look at how development took place in production relationships, in relationships between people, you will see the true causes of the clash with Stalinism or with any other concept of the building of socialism. With victory in the revolution, in essence only the continuation of a process, came success, and here again we find a continuity which had the goal of finding a sociopolitical and a socioeconomic system that would as far as possible bring power most directly to the people, to the working masses.

DELO: Continuity is a word to which we constantly return. It is also conceived of as constant movement, constant seeking of new ways. If we look at the future from that point of view, where are we today, in your opinion? What are the encouraging signs and what are the obstacles? We would also like to talk about Kardelj's theory of the pluralism of self-management interests....

Dolanc: We have been talking about the experiences of the past, to which we must turn. The quest for new directions must originate in continuity. The political line of the party has been confirmed at both the domestic and foreign level. If today we look only at the people's standard of living, never has any people or nationality in Yugoslavia enjoyed such living conditions as we have today, on such a high level. I think that that is the great distinction of the Yugoslav communists, for their gaze was always directed ahead, not only at the current situation. We sought answers to questions that at times whre challenges to the whole world.

If Edvard Kardelj Were Still Alive, Many Present Difficulties Would Be Overcome More Easily

[Dolanc continues] I must stress, that many of the difficulties with which we are struggling today would be overcome more easily if Edvard Kardelj were still alive. Next to Comrade Tito, he was a man, who with his presence, his intelligent, realistic and comprehensive approach and assessment of problems in Yugoslav society, many times decisively contributed to our finding ways out of various critical situations. But Edvard Kardelj is no longer here, and we feel that void. I have never overestimated the role of a single person, but that loss requires of us all an even greater amount of responsibility, realism and Kardelj-like behavior and understanding, than would have been necessary if Comrade Kardelj were still with us.

DELO: Regarding these thoughts of yours, we would like for a moment to pause on the question of personality and personal influence on history, on the one hand, and the effect of history on great personalities, on the other hand.

Dolanc: There has been quite a bit written and said about that. At times of historical events, individual powerful personalities made their marks, for they perceived the temper and the conditions of reality, with their special approach they knew how to utilize everything to advance the path of progress. Among such personalities we can readily include President Tito and Edvard Kardelj, as well and other individuals who with their labor, their ability to maintain their perspective and their direction, have earned their place in history, which no one will ever erase.

DELO: When we talk about the future, we cannot bypass the study "Directions for the Development of the Political System of Socialist Self-Management," in which there is not only Kardelj's view on tomorrow, but also on Yugoslav society in the distant future.

We Do Not Have as Many Skyscrapers as Others, as Many Atomic Power Plants or Automobiles, but We Have a New Man, and That Is the Most Important

Dolanc: You wanted to talk about the future, about the year 2000. I would like to have Yugoslav society and the world develop in that positive spirit and with the vision which Kardelj saw. If the world were to develop in that direction, we would have peace, happiness, a pleasant life, things would be fine for us and humanity would have a perspective. Not only Yugoslavia, for Kardelj's "Directions of Development...." is of historical importance not only for Yugoslavia, but for the world. I have spoken with many prestigious leaders of various political parties, not only of communist parties, who have given Kardelj's work a high evaluation. Specifically, existing political systems are no longer capable of following the development of the human mind and the demand for freedom of personality and creativity. Political parties, from some communist ones to socialist and others, are not capable of perceiving the dissatisfactions that are being expressed, much less to take them in hand and use them to achieve any essential changes. Here in Yugoslavia perhaps we do not have as many skyscrapers, nor as much asphalt, atomic power plants or automobiles, but we have a new man, and that is the most important. A new man emerges with much greater difficulty than new factories and skyscrapers. We have a new man and the knowledge that the future depends on him, despite all the problems, conflicts and negative behavior. A self-management person must be aware of where he lives, how he lives and of the fact that his future depends on him alone. That is the same historical statement made by Kardelj, that man can achieve his happiness only by himself.

DELO: You mentioned problems, conflicts and negative behavior. Does it not seem to you that here you might also place certain tendencies that hold that the standard of living in itself is a sufficient proof of some sort of good fortune, of happiness?

Dolanc: I cannot agree with those people, although individuals also hold that the standard itself is enough.

DELO: At times we also think something that could be dangerous, that nothing bad can happen to us.

Much Will Have To Be Denied, for the Economy Cannot Bear Such Burdens

Dolanc: If we want to retain what we have now, we will have to do much more, and we will also have to deny ourselves some things. Therefore I support all the efforts being made to improve one of the most important factors, conservation, and I mean conservation in all areas of living. In the coming period we will and must be able to direct our efforts in social superstructure primarily toward the health protection of the citizens and we must prepare all the conditions for the further development of the educational system. We will have to deny ourselves many things, for the economy as it is at this moment cannot bear the burdens that are now being placed upon it.

DELO: When you speak of conservation, you are probably thinking that it must be emphasized at all levels, from the basic units to the federation.

Dolanc: First of all we must reevaluate all aspects of activity, including basic organizations and communities, municipalities, republics, provinces and the federation. If we begin with the basic organization, I am referring first of all to capabilities, the organization of labor, and attendance on the job; then there are various representative collectives, and frequent unnecessary inflated behavior related to various celebrations and the like. I also believe that much better organization will have to be done in local communities. If we turn to the past, I might mention various actions that local groups can carry out, from volunteer labor and joint action to voluntary contributions. Similar things can be done in municipalities. I can understand the desire of every community to have its own hospital, sports fields or stadiums, asphalt roads, radio stations and magazine. That is all nice, but at some point everyone must think twice about every such need, everyone from the basic organization to the federation.

We Have Behaved Abnormally: We Have Constantly Lived Better Than We Worked

DELO: It is our fear that in our manner we will oversimplify that economizing and limit all our actions to daily wages, to somewhat more or less traveling in Yugoslavia and abroad, and neglect the essentials. We think that in political action we must be convinced, that again everyone is talking about economy and will miss the moment when we must act. Will we again fail to see the forest because of the trees?

Dolanc: None of the activities that are connected with our undertakings for economic stabilization can be a campaign or a one-sided approach. All of these efforts for stabilization, the battle for greater labor productivity, for supporting exports, for selective approaches aimed at reducing imports, and for economizing--all of these must be lasting factors of the economic policy and the social life in Yugoslavia as a whole. We are not discovering anything new. In the developed countries, all of these approaches have been the primary elements of normal economic policies for a long time. The way in which we have been behaving has not been normal. We have constantly lived better than we worked, and therefore in all areas we have had that foreign trade deficit, indebtedness and the like.

DELO: We have already been saying that for a long time. But now is the situation so dramatic that we must think about it more seriously?

Dolanc: I would not say that it is dramatic, but it is serious and complex. Some people confuse socialism with a social event. We have a low rate of productivity, we conceal thousands of needs within the superstructure and the infrastructure, yet we do not have sufficient capital accumulation for expanded production. If the trends of extensive employment, low productivity and simultaneous increase in consumption continue as it has in recent years, and if the Yugoslav economy continues to be burdened with the obligations it has to the superstructure, we can easily get into a situation that will threaten not only expanded production, but the maintenance of production, for we will have to utilize reserves for amortization.... For Slovenia that is an unusually important factor, considering the fact that in essence the structure of the Slovenian economy at the moment is not at all well integrated into the overall structure of the Yugoslav economy, and we have antiquated production equipment and technology. In Slovenia, we must restructure the economy into the specialties that will open new prospects for economic development for Slovenia. For that we need money.

DELO: How would you define the responsibility for that direct action for the new year? Several times, resolutions of the Presidium of the Central Committee of the LCY have expressly emphasized that some problems are the consequences of insufficient responsibility, failure to honor agreements and the like. How does the level of responsibility appear to you in that light?

Dolanc: I think that responsibility is required at all levels, from the basic organization to the federation, with precise areas of responsibility, and we must also separate good and productive work from that which is not, when we can easily talk of theft from another person. We must define what is a social event and what is socialism, and what is the responsibility of people regarding the position that the individual has. In everything that we have discussed today, I have been thinking not just of the workers in economic organizations, but in all areas of public life, and some of my critical evaluations hold particularly for the administration and the acts of administrating.

DELO: We should also separate administrative decisions from administrative policy.

If a Worker, or Even a Minister of Political Figure, Does Not Work Productively and With Discipline, He Should Lose His Position

Dolanc: Without a doubt. As I have said, I regard responsibility to be on all levels and in all sectors of the economy. That means that if you do not work well, you will lose your position, your existence and that of your family will be threatened. Here we must begin with the idea that such a policy holds for all. In this way we will solve many of the problems that we have been discussing. Let's say, unemployment. Tell me, where has it happened here, that someone has barely waited to take the job of a worker who does not work? I know of situations in mines at Hrastnik, Trbovlja and Zagorje, where they cannot get workers who will go to work in the mine pits. It is similar at many other working places, for both trained and unskilled workers. Of course, we must create the kind of responsibility where if a worker will not work productively and with discipline, he will lose his job. The same thing must happen to a minister or other political figure, if he does not perform well. Therefore it is not merely a matter of a 1-year mandate. If a leading worker works poorly, he should not be left in his position for a year, but rather he should go as soon as possible. For that reason I support a flexible mandate.

DELO: At times at least, it appears that collective leadership and the 1-year mandate would increase responsibility.

Collective Leadership, Which Is More Democratic, Will Open the Doors to Many Who Will Accept Their Share of Responsibility

Dolanc: Precisely collective leadership with a flexible mandate can succeed in making the leadership more democratic, more unified, and can open the doors for many, who perhaps are now standing to the side, so that they can accept their share of responsibility. It would be in error to look at that support from one side only. The sense of Tito's charge to us was to develop more democratic relationships in our society on a comprehensive basis.

DELO: Not only in the leadership, for not much would be accomplished if democracy were increased only within it.

Dolanc: And therefore I emphasize democracy in the society as a whole. Like all the other republics and provinces, Slovenia, too, accepted the charge of President Tito and is seeking to implement it in accordance with the circumstances in which the Slovenian working class, Slovenian society and its working people live. I would especially stress the exceptionally important role and place of the Socialist Alliance in Slovenian political life. Slovenia also accepted with all seriousness President Tito's charge when at last year's congress of the Yugoslav trade unions, he urged all to work for the realization of the charge studiously, seriously and responsibly.

DELO: If we can turn back to responsibility for a moment, we would like to turn attention to the fact that at times we protect poor work to incomprehensible extremes.

The Self-Management Society Cannot Dare To Protect a Parasitic Way of Life by Individuals, Groups of Collectives

Dolanc: In Yugoslavia you are not hungry or in rags, even though you do not work. That is primarily because there are some institutions which make that impossible. Probably that is proper and good, although certain deviations have appeared. At the same time I am convinced that in legislating we must also change certain decisions. We cannot allow our system, our jurisprudence, our self-management society, to protect malcontents who hate work and loafers. We cannot permit the self-management society to protect what is essentially a parasitic manner of life by individuals, groups or collectives, who recognize, that they are living in a society....

DELO: ...which can do nothing to them.

Dolanc: I have heard that before. Yet it is not true that nothing can be done to them. If we were conscientiously and without opportunism to carry out the legal provisions that we already have, we would be able to eliminate many of those excesses. In organizations of associated labor, however, there is still a great deal of opportunism. We also meet with the desires--I wouldn't say that they are predominant, but there are some--where some would be glad to attribute only negative features to self-management; they simply do not make decisions, but rather make the excuse that the self-management concept is one thing and the workers council is another.

DELO: On the other side are examplex, where individuals have become rich at the expense of the working people and the society, because from their high incomes they do not give a single dinar to pay for social needs.

Dolanc: The burden of the social superstructure is borne truly by the economy alone, by people who are employed. We must change the tax policy and seek money to cover social needs where it is really to be found. Furthermore, we have a group of people who earn a great deal outside of working hours and who do not pay any social contribution from those earnings. That relates primarily to the numerous service occupations, which we have not developed sufficiently in the public sector, private craftsmen of whom we have too few. You should not understand my words as an alarm and a call to persecute the craftsmen, but rather as a call for battle against so-called hack craftsmen and black market moneygrubbers.

DELO: How could we manage to formulate an appropriate tax policy and at the same time avoid penalizing private endeavors in the service occupations?

Dolanc: As far as tax policy and other regulations are concerned, assemblies have been called to discuss those matters from the commune to the Yugoslav level. I think that regulations will be approved. A great deal depends on individuals, on their attitude toward work and the relationship to everything that is happening in the social spheres. The easiest thing to do is to wait, to be an opportunist. In our self-management society we have certain manifestations that are more or less normal, which accompany normal economic and social development such as ours.

Certain Self-Management Decisions Are too Influenced by Consumerism

[Dolanc continues] We have spoken about economizing. Yugoslavia receives approximately $1.5 billion from tourism, but we use a great deal of that for our tourism abroad. Many developed countries have greater and sharper limitations on the convertible currency use of their citizens than we have. We are among those who have always advocated that the convertible currency system should be as simple as possible. I think that that is right; the proof is in the convertible currency that our citizens have in convertible currency accounts. That money is in circulation and it is an important factor in our transactions with foreign countries. Nevertheless, I think that we will have to bring something to the realization of the people. Some self-management decisions are clearly consumer-oriented. This does not hold only for individuals. Until the realization predominates that all of us together and each individual is responsible for tomorrow's development, for the future, until that time we will have economic problems.

DELO: You are then for an abrupt confrontation with reality.

Dolanc: I am for a responsible confrontation with reality, with the actual situation, with the truth or whatever you want to call it.

DELO: Why?

Dolanc: I think that our people still have not sufficiently recognized the seriousness of the moment in which we live, in which the world finds itself.

DELO: At times we do seem to act as though we were an isolated island, which cannot be hit by any negative wave.

Dolanc: Do not be so radical in your judgments!

DELO: A year ago you indicated that we must have a clearer program for energy conservation, that many developed countries were, for example, limiting oil consumption. At that time many people said that nothing of the sort would be necessary in Yugoslavia, that such actions were political slogans and did not affect the Yugoslav situation. Yet now Yugoslavia is also limiting fuel consumption.

As Always We Are Our Own Worst Enemy With Our Behavior

Dolanc: Do not proclaim me a prophet. I was working in forums where we perceived those problems. As I have already said, then such theories were predominant in society and they also strengthened the trends toward increases in all kinds of consumption. I think that we still talk more about the coffee shortage than about conserving energy and oil. Again we are at the realization that I mentioned a moment ago. For everyone among us, it is a foregone conclusion that there must be coffee. Yet he does not understand, that for coffee we pay $200 million a year. That also means that such an individual does not clearly see that next year we will have to pay much more for oil than we paid last year, that it will become more expensive again. We have problems with all sources of energy, from coal to electrical power plants. We will have to perceive that. Again I will declare that the people will have to comprehend reality. At the self-management leaders conference in 1971, Edvard Kardelj cited Dante Alighieri: "The clang of the bell does not signal trouble, it signals the attack on the enemy." Kardelj continued: "At this moment we are our own worst enemy with our behavior." That thought from 1971, I think, still holds true today. Our future depends on all of us, the way things will be in 1980 and in the year 2000 depends on us. I am an optimist, for we have come out of all the crisis situations in a stronger position. If we also overcome the present economic difficulties, both domestically and in our economic relations with other countries, the integrity of Yugoslavia, the power of the working people and the democracy, will have a broader base than they do now. In all of this we must, however, recognize that we must solve our problems on the basis of self-management, with constant negotiations and seeking of agreements. We must realize that even where there are administrative actions and resolutions, they too serve to strengthen the self-management basis of our society. Of course this holds where necessary resolutions are concerned....

DELO: ...and where they are of types that truly strengthen self-management. Without a doubt it includes unpopular resolutions that require political action.

Dolanc: We discussed that in the Presidium of the Central Committee of the LCY. It truly does involve unpopular decisions. Because of the high standard of living, our people do not sufficiently recognize the seriousness of the situation and therefore they do not behave in a suitable manner. We raise a hue and cry about such a triviality as, for example, coffee, and yet we are unable to see the forest because of just one tree. We must reach the point where people behave differently at all levels and in all areas of life.

DELO: Are you thinking about the stabilization that must be achieved at least during the coming intermediate period?

Dolanc: Of course. Everything I have been talking about cannot be changed in the course of the new year, it will take more time. I am thinking chiefly of two things, the constant development of the political system so that those people who are the direct producers can have a more concrete and optimal effect on policy, and the need to fill certain voids which still exist for which we have no basic, systematic laws (such as absences from work and prices). We must also change tax policy so that the real burden for social development will be borne by all, not just by the working class that is involved in economic activities.

DELO: Your current ideas again confirm the statement that socialism is not a society without contradictions, that we cannot build socialism without deviations. How do you regard the role of the LCY at the present moment in society?

Dolanc: The LCY is no longer the only agent responsible for the development of our society, for precisely that sort of responsibility is borne by other subjects of political life. Weaknesses often appear among subjective forces, and until we purify those subjects of individual problems it will be hard to eliminate them from the overall social superstructure and from the base.

The Present Problems Are Qualitatively Different From Those That We Have Confronted in the Past 30 Years

[Dolanc continues] In the past 30 years, the strength of the LCY was partly in the fact that we were warned in good time of situations of conflict, that we never were in a dramatic situation or on the brink of a true political crisis. Whenever conditions became ripe for trouble, the League of Communists with its strength and its broad social support was able to clear things up. With this I do not want to deny the difficulties that we have with the economy, for those problems are qualitatively different from others that have occurred in the past 30 years. If in 1966 we were able to deal with bureaucratic and centralist desires, in 1970 with nationalistic ones and later with liberal tendencies, even in the party itself (here I am thinking of the Brioni plenum and of the Karadjordjevo session of the Presidium of the Central Committee of the LCY), in the realm of the economy it is a matter of a different type: Everyone would like to have as much socialism as possible, more than we ourselves are capable of making. There are various interests there, there is the difference between the pluralism of self-management socialist interests and the pluralism of political interests.

In the pluralism of self-management socialist interests it is a matter of contradictions that arise because of them and of the question as to when, how and to what degree we are capable of fulfilling a definite self-management interest of one or more members of the self-management socialist society. In a political conflict, however, it is a matter of power, of political desire. In the conflict of self-management socialist interests therefore, it is a matter of the interests of those who are for self-management, for socialism, for democracy in their society, but it is only with difficulty that they sometimes agree as to whose turn it is, who is first and who is third to have his interests served and whose interest is the best at a particular moment in terms of usefulness and need for our community, because it will open up possibilities for the development of the society as a whole.

DELO: Yugoslavia is the world in miniature. Our state has developed with exceptional dynamism, we have invested a great deal and are still investing for the more rapid development of the less developed. The data show that we are even investing more than the most highly developed countries of the world. Thus it cannot really be said that the opinion is true that in declarations and in international forums we take one position and at home a different one.

Dolanc: I think that it is the duty of the whole society, both developed and undeveloped areas, to see to the more rapid development of both the less-developed and the developed. That is connected logically both economically and politically. No one denies the problems, but we are solving them. At the present moment, the greatest problem is the development of Kosovo. We must do everything to see that the production capacities of Kosovo grow more quickly. Another obligation is to Montenegro, about which we have already spoken. Yet we must always recognize that the differences are not only in the degree of development between the developed and less developed, but also within the developed parts. The debate currently under way on the criteria of underdeveloped regions is exceptionally typical and will be the more so every day. I am deeply convinced that despite the difficulties we will find solutions there, too, which will be acceptable to all.

DELO: Does it not seem to you, that in those debates we should also consider more economic viewpoints, although of course no realist would exclude the political ones?

I Do Not Consider It Scholarship When Something Is Subordinated to Momentary Political Interests

Dolanc: Those debates must be much more responsible and measured, especially from the standpoint of economic development. In that, however, we cannot and dare not deny political, national and other interests. I think the economic elements will continue to be present. The opposite would occur if every interest were to become so politicized, as sometimes happens. For example, at economic and other scholarly institutions we have ordered studies (in all republics and provinces) on the criteria for undeveloped status. There were approximately as many differing learned opinions as there are republics and provinces. In part that is understandable, but not entirely. I am frightened by some desires here to have scholarship accommodated to politics and not the reverse. That is a problem which we must deal with with all seriousness. I do not consider it scholarship when something is subordinated to momentary political interests.

DELO: Of course, those debates must be relieved of certain hypotheses and deceits. Every critical remark must be equated with nationalism or with lack of understanding of the development of the undeveloped or the developed, and this is certainly in both the short term and the long term very dangerours.

Dolanc: The method for resolving our contradictions may very well be nothing other than true democratic negotiating and seeking of agreements. We do not have any other methods available here. That method has become an inherent part of our policy, or should become one. It is also true that it seems that a number of problems which first appeared very simple are not really so simple. Perhaps someone in Ljubljana is convinced that his particular interest is the most useful and decisive. Yet someone else is equally convinced in his way and his interests in Sarajevo, and a third in Belgrade, or wherever else, in whichever of our republics or provinces you want.

DELO: But that is realistic.

In Yugoslavia There Is No Question, About Which We Could Not Reach a Democratic Agreement While Respecting the Interests of One Another

Dolanc: It is realistic, probably very honest and well-intentioned, but it is too divorced from the needs, situations and circumstances in which someone lives in Slovenia, another in Bosnia, or a third in Macedonia. There is the great charge to the communications media, as well as political and other organizations, to help us understand one another better. It is not only our own needs, but also the needs, interests and capabilities of others that must be considered. I am deeply convinced that there is not a single question in Yugoslavia that cannot be resolved in a truly democratic manner, respecting the interests of one another and the reality of long well-known economic principles.

DELO: Now at times we vulgarize the pluralism of socialist self-management interests, so that one stresses his own interest as the only beneficial one and will not listen to another's.

Dolanc: That too is realistic. There have been, are, and will continue to be such occurrences. It depends on all of us, and particularly on the communists, and that is one of the charges of the LCY, to find in ourselves the knowledge, will and strength to constantly overcome such situations. We will easily overcome them when we truly implement the system that we have outlined with the constitution and the law on associated labor.

Income Relationships Are Currently One of Our Weakest Points

[Dolanc continues] Many problems would disappear if we could implement all the regulations concerning income relationships. In investments, the economic interest has appeared in a totally new light. We are particularly interested in that here in Slovenia. We have about 150,000 workers from other republics, and that means a need for that many new apartments, as well as for community services and suitable schools that are not at present available. Would it not be more normal, to invest the capital that we have where people are living, with all the consequences that come along with that? Our economic organizations will go along with that only when proper income relationships are developed that will determine a definite income both to the investor and to the one on whose territory the economic activity involved is located.

DELO: Undeveloped income relationships are, from ever more frequent assessments that we hear, one of our weakest points.

Dolanc: That is probably a matter of definite lack of confidence as well, which comes as a consequence of certain poor experiences from earlier phases in our development. We say that income relationships are a task for associated labor, but all the while we are thinking in a one-sided manner about the economy alone. We forget that we in the Presidium of the Central Committee of the LCY are also associated labor, along with the delegates to assemblies, from local assemblies to the federation, as are those in community committees of the LCY, in the Socialist Alliance from local groups to the union. In 1980, all of these subjective functionaries should have as a permanent task the development of income relationships. We must strengthen and develop a mutual feeling of confidence between republics and provinces, as well as individual economic branches.

We Cannot All Be Presidents of the Government and Be Involved in High Politics

DELO: Concerning that and other tasks, we must also start to build elements for evaluating political work. I think that it must become more normal when someone on some central committee says that they have established such and such concrete income relationships, rather than to be constantly saying that income relationships are needed, although we do not deny the need for such mobilization. We think that for too long and too many times we have been holding in the mobilization phase, propagandizing, rather than evaluating what has or has not been accomplished.

Dolanc: Just recently I said that one of our chief traits is that we would all be happy to be some sort of president of the government and foreign ministers, who are involved in "high politics." That is true for all, from local groups to the federation. We often flee from concrete matters, from the battle for changing factors in concrete circumstances. That is a problem about which we have long kept silent, and it appears also in confronting the everyday problems of life. The difficulties in providing positions should not be attributed only to subjective errors, to the egoistic behavior of people in certain positions, to special interests, but also to undeveloped income relationships. We must be much more decisive in public debates, in personal behavior and also in the necessary responsibility for such behavior.

DELO: It also happens that we believe that we can easily solve the everyday problems of life merely by debates at meetings.

We Should Not Permit Individuals To Gain From Their Monologs at Meetings

Dolanc: Many still think that meetings can replace work. The number of meetings has surpassed all bounds, many of them are unprepared and many are repetitious. Recently I spoke with some scholars who had been working for many hours for a meeting as if it were a research project. I will say nothing of the fact that similar things happen in economic organizations and elsewhere, and that all these meetings are during working hours.

It is exactly true that our system is such that it requires people to have meetings, and that is good. Yet meetings, conferences and the like should be organized, prepared and directed at key questions, and short. They should not be for the advantage of certain so-called professional political or other functionaries, who with their monologs benumb the surroundings. This also involves the coordination of political figures in local groups, communities, republics, etc., so that they can reach agreement as to what who is going to do.

DELO: At times it happens to us that four different organizations come to our work collective with requests for four similar sets of data.

Political Work Is Truly Social Work, and It Should Not Be Limited by Editorial Restrictions

Dolanc: That, of course, is a consequence of the fact that no agreements are reached. Concerning that situation, it should again be stated that self-management gives rights but it also gives obligations. Those social obligations must be fulfilled outside of working hours, not during them. Each worker in a self-management organization should contribute an hour or two weekly for his duties. It is also true that we encounter the desires of political professionals to have the whole job completed during their 7-hour working day. I don't recognize any political work that is lost in the administrative office. Political work is truly social work, which requires one to be prepared at any time, which is suitable to our real situation, calling for political action, meetings and preparation of action for the next day, and not for action carried out in the old manner, where one destroys results rather than achieving them in action. We have not made progress in those methods. I am also against the situation, which has recently begun to appear in the LCY and also in other sociopolitical organizations, which involves the reading of various speeches, articles and other information, lasting for hours and hours. It is not only that this is unproductive....

DELO: ...although in principle that is also late.

Dolanc: Particularly in the communications media, you often encounter objective, critical and responsible writing about those problems. It is, however, also true that the informing of the direct producer is extremely important and that must not be neglected. We must find forms that will in a concise, rapid and direct manner inform the producer about everything that truly involves him and that he needs to know. Yet the truth is....

DELO: ...that often we manipulate him, provide him only with information.

Dolanc: I would not say that we manipulate most of the information. If so we manipulate it with very brief reports. Manipulating people is one of the most uncertain aspects of our society and we still experience it often. That is not good.

DELO: The present situation provides a special challenge to the LCY either to function in a new way or to continue in the old way. Both possibilities are available.

Dolanc: The LCY will readily work only in the new way. All desires that would try to brake the LCY in the development of its role, begun during the revolution, and which we have advanced at congresses beginning with the 6th and particularly at the 11th, including part of the platform of changes in direction contained in Kardelj's study "Directions of Development of the Political System of Socialist Self-Management," would in essence mean a rejection of those things that the LCY has resolved and that are contained in its program. The LCY cannot go backwards, it can only move forward along the path that has been drawn.

DELO: That is to say, from self-management to the LCY, and not the opposite.

In the Political System the LCY Has More Obligations, Duties and Responsibilities, but It Has More Rights Only in a Defined Area

Dolanc: It is very clear, that the LCY is one of the factors in a self-management society that in any case has a specific role, and has even more responsibilities than others while having absolutely no more rights than others. The LCY has more obligations, more duties both as an organization and as individual members, but by the constitution and its program it is equated with the constitutional aspects of the socialist self-management society. Its rights and obligations are more responsible and more precise only in that area where it must directly defend the basic accomplishments of the revolution, social property, the rule of the working people, equality of our peoples and nationalities, and the integrity and independence of Yugoslavia. In defending the basic accomplishments of the revolution, of Yugoslavia as a socialist self-management and unaligned state, the LCY has and must have more rights than others. That does not mean that other functionaries and subjects are not also important in that area.

DELO: By that, you are not denying the objective uncertainties that in daily practice readily put the party in a position above others?

There Are and Will Be Negative Manifestations, and We Must Fight Against Them Conscientiously, Responsibly and Openly, Without Opportunism

Dolanc: Precisely because there are manifestations that are not in harmony with the program direction of the LCY. I think it would not be normal if there were not such things, for they happen in life. The important thing is that we know the directions of the LCY and that we identify the negative manifestations and struggle against them conscientiously, openly and responsibly, and without opportunism. In short, in the struggle against a factor that is clearly directed against such a self-management direction, we must always think about Edvard Kardelj's statement: "Without socialism there is no democracy and without democracy there is no socialism."

DELO: Despite all the difficulties, from which we do not flee, can we then figure that not just in the year 2000 but as soon as next year there will be more freedom and democracy?

Dolanc: That is exactly right, because without more democracy, without new qualities in self-management development, we will not be able to solve our problems next year either. Certain administrative decisions that will be necessary must also be regarded only in the function they serve of strengthening the bases for the further development of self-management socialist relationships. Decisions that would limit the development of self-management, and thus the development of democracy in all areas, will not contribute to economic stabilization or to the establishment of self-management socialist relationships.

DELO: As we clearly see from our conversation, you recommend that Yugoslavs sober up after the New Year's Eve party, and as quickly as possible.

Dolanc: It would be good to begin even before the New Year's Eve party.

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RAILROAD TRANSPORTATION PROBLEMS DISCUSSED

Belgrade PRIVREDNI PREGLED in Serbo Croatian 17 Dec 79 pp 1, 10

[Article by Zdravka Cicmirko-Pokrajcic]

[Text] The volume of goods and passengers carried by the railroads has been smaller from year to year in comparison to the results of highway transportation. Modernization of the tracks and rolling stock has been delayed, so that the Yugoslav railroads have difficulty in coordinating with international railroad traffic. There are shortages of freight and passenger cars. Yugoslav railroads paid 413 million dinars in rental for railroad cars in the past year. All say that this year that sum will be doubled. There has also been great delay in introducing new tariffs for the transit of foreign trucks, which traffic has a great impact on the decision to ship by rail or by highway. It must be stressed, however, that the development of transit shipments, which is a very significant factor for the railroads, requires so-called integral transport, an area in which Yugoslavia currently lags markedly.

The railroads are oppressed by enormous problems that in the past several years have been the topic of discussion for all groups in Yugoslav society. Certain efforts have been undertaken to improve this unsatisfactory situation. Despite great investment, there are still no real results. Naturally, the reasons are to be sought in the railroads themselves, in the slow reestablishment of profitable relationships, and in general, in self-management transformation.

Concerning the status and problems of the railroads as one of the largest technical, technological and labor systems in the country, whose influence on the development of the overall economy is very significant, and concerning the railroad's inclusion in international traffic transit operations, PRIVREDNI PREGLED spoke with Nikola Filipovic, deputy president of the Operations Committee of the League of Yugoslav Railroads.

[Filipovic] "Transit operations are very profitable for both the railroads and the society as a whole. Here much greater effects are achieved than in internal shipping. The Yugoslav railroads carry annually about 7 million tons of transit goods, of which land transit accounts for 2 million, with 4.5 million being carried by ship. In financial terms that amounts to 2.5 billion dinars. The most significant transit cargoes are from Hungary, Greece and Austria, while shipments from the USSR by land transportation are growing. For domestic markets, the railroads annually handle 9 million tons of imports and 5 million tons of exports."

Speaking further about the role of transit as the most important factor for the railroads and about the difficulties that accompany transit, Filipovic said:

"During 1977 and 1978, transit declined by about half a million tons; that represents a significant amount of convertible currency lost. In analyzing the causes of that decline, the conclusion was reached that certain goods which formerly passed through Yugoslavia were now being shipped in different directions, while certain other shipments that still go through Yugoslavia are now being carried by foreign trucks, that is, in highway transportation. The reason for this is that Yugoslavia for years has collected no taxes for the transit of foreign trucks; currently these are being collected, but in essentially insignificant amounts. The taxes were introduced with great delays, and this had a crucial impact on the manner in which goods were shipped, by railroad or by highway. I have spoken about the introduction of financial taxes a number of times. At this time I would like again to stress that there is great resistance to such taxes by certain Yugoslav agencies."

Filipovic continued: "In speaking about transit, I would like to point out that for us the route through Hungary is a bottleneck, and there are severe criticisms of our economy for not being able to undertake the shipping of all goods going to the USSR. There are also problems on the Hungarian side, where representatives say that the reason is the switch to wide gauge track at Cop. I think that goods that gravitate in that direction should in part be rerouted through Romania. On the other hand, an agreement should be reached with the economy as a whole that goods are to be shipped with continuity and certainly greater efforts should be made for the introduction of integral transportation means (such as containers), since in that manner transshipment for the USSR could be accomplished more quickly, thus assuring higher capacity."

Methods for Increasing Transit Operations

Concerned about the decline in transit shipments on the Yugoslav railroads, Nikola Filipovic in further statements stressed that the railroads must fight not only to return transit volume to previous levels, but also to increase above that point, for real possibilities of such increases exist.

"Our country is located on the crossroads between Eastern and Western Europe and the countries of the Near East, and it also has the Adriatic ports which give it very good connections with the world. That geographic position can be utilized to the extent that we prepare Yugoslav railroads for higher volume and quality in shipping, competitive prices, etc. Currently we have unutilized capacities for transit shipping. The most important factor for developing transit is integral transport procedures, and in this Yugoslavia lags markedly. The means for integral transport include conditions for combined shipping and connections between all branches of transportation involved in shipping so as to be able to provide door-to-door shipping services. I think that this question should become a matter of involvement for the broad social community," concluded Filipovic.

The Yugoslav railroads have very good cooperative bonds with all neighboring railroad systems and they have initiated a whole series of actions for bilateral and multilateral operations, particularly concerning transit operations. Concerning these matters, Filipovic stated:

"I would stress particularly that at the beginning of this year the railroads organized a conference on shipping goods on routes including Western Europe and the Near and Middle East. The conference was attended by the FRG, Switzerland, Austria, Bulgaria, Greece, Turkey and Iraq. Problems considered and partially resolved included prices for shipping per kilometer and ton, joint actions for vitalizing the shipment of goods, a joint integral transport organization, and a whole series of other matters. Many of the things discussed at the conference have already begun to be implemented, so that the trend toward falling transit shipments through Yugoslavia has been halted, and a mild rate of growth has even been recorded.

Greater Investments Are Needed

"The fact remains, however, that much more rapid efforts must be made to equip the Yugoslav railroad network to perform the new function which lies before it. We must be more active in following the development of the railroad systems of our neighbors and in the world, for we are a part of that world. That means investments in the development of the Yugoslav railroads must be greater. We have prepared the basic guidelines for the development of the Yugoslav railroads in the intermediate plan period. Discussion of these guidelines has already taken place in the Traffic Committee of the Yugoslav Economic Chamber and in the Yugoslav Assembly. The concept now is going into the stage of public debate and discussion. The joint determination has been made that the main routes should be equipped for higher speeds, the tracks should be equipped with modern devices, safety should be provided, and all of these efforts would be aimed at achieving higher capacity on the railroad track system and at developing integral transportation. In all this activity, greater synchronization is needed both within the rail system and between all branches of transportation on the entire territory of Yugoslavia and even beyond, in neighboring and other countries."

For a Modern Railroad, More Modern Railroaders Are Needed

In the conversation, which lasted for nearly 3 hours, on two different occasions, Nikola Filipovic, the deputy president of the Operations Committee of the League of Yugoslav Railroads, was asked to say something about the transportation of passengers; he indicated that he was not exactly enthusiastic concerning this question.

"Concerning passenger transportation, there are many weaknesses about which quite a bit has been said and written, and I would not want to repeat those weaknesses. For years passenger transportation has been neglected. The current situation in the oil market, however, along with actions for the protection of the human environment and a series of other factors will certainly have impact on a trend toward increasing numbers of passengers on the railroads, naturally to the degree that the railroads offer a certain level of quality transportation.

"If our railroads wish to attract, or more precisely to regain, lost passengers, they must prepare trains for speeds of 120 to 160 milometers per hour, at least on the main lines, as well as high-quality, comfortable rail cars. An agreement has been signed with the Rade Koncar factory for the production of universal electric locomotives that will overcome the hodgepodge of equipment on Yugoslav rails. Soon an agreement will be signed with the Gosa factory for the production of modern rail cars that can be integrated with international traffic, for the orientation of the Yugoslav railroads is in transition from engines and cars of domestic production alone. That sort of policy originates in favorable credit conditions, which make an enormous contribution from the point of view of the country's balance of payments situation, and the utilization of domestic capacities. Until the present time, the railroads had largely imported various types of passenger cars and complete trains, and even freight cars."

Speaking of passenger transportation, Filipovic also explained the type of railroad workers that are needed by the modern railroad.

"The modern railroad, which should provide more comfortable and safer passenger transportation, presupposes a modern profile for a railroad worker. This is a matter of the level of education, of high responsibility, and also a higher personal and social standard for workers on the railroad. These are all open questions that the railroad cannot resolve on its own, but rather it is essential that there also be involvement of the broader social community.

"If we want to stay in step with international railroad transportation, we must have modern cars and trains. At present Yugoslav railroads lack many needed freight and passenger cars. Last year, the railroads paid 413 million dinars for rental of rail cars. I believe that that number will be doubled this year. Therefore, the acquisition of railroad cars is a very urgent matter, one of the most important."

At the end of the conversation, Nikola Filipovic turned to the matter of self-management reorganization of the railroads.

"We are not pessimists concerning the resolution of the railroad's problems. In recent times the railroads have been the topic of debate of all segments of the country's population. That activity is already providing results. Three social agreements have been concluded and many measures involved in those agreements are beginning to be implemented. The process of market and income bonds has begun, and there is a growing feeling of competence. At the same time, society is requiring more responsibility from the railroads. I think that it is useful that the railroads have opened up and become self-critical, even though it seems to me that some are beginning to abuse that situation. I consider that all measures from the social agreement should be implemented consistently and a social agreement should quickly be concluded on transportation prices. During the present year new economic relationships must be established for the railroads, since such a resolution has been approved by the League of Yugoslav Railroads.

"In the overall activity, I would again stress that there must be more synchronization, more agreements and contracts relating to all activities of the Railroad Transportation Organization, for the degree of mutuality and dependence of one on the other is very great. If in that chain of dependence a single link fails, that will affect the income of all the organizations that are involved in that chain.

"The most recent situation with oil is of lasting character, and it gives enormous advantages to the railroads compared to other branches of transportation. Already in some areas the demand is greater than the railroads can supply. For that reason, we are seeking not only to carry out the measures that have been approved consistently, but also to undertake additional measures and larger endeavors so that the railroads may become modernized and equipped as quickly as possible for more and higher quality work, greater transit volume, and more passenger transportation on international routes. I am convinced that this is in the interest not only of the railroads, but also of Yugoslav society as a whole."

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